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THE COLON AND COLITIS.*

BEING THE ANNUAL ORATION TO THE MEDICAL SOCIETY OF LONDON.

BY

LORD DAWSON OF PENN, G.C.V.O., C.B., F.R.C.P.,

PHYSICIAN-IN-ORDINARY TO H.M. THE KING; PHYSICIAN, LONDON HOSPITAL, ETC.

To attempt to traverse this wide subject within the time at my disposal would show a want of appreciation of its complexity and importance. I propose to try and requite the honour you have conferred upon me by presenting to you some thoughts and reflections based on observation, study, and clinical experience. But for the fact that we have an enjoyable function in prospect I should regret that no discussion can follow my remarks, seeing that it is a subject on which our President can speak as an outstanding authority.

The importance of the colon is borne in upon us by the recurring experience of our daily lives. On its periodic functioning depend our health, comfort, mental alertness and emotional outlook to a greater degree than we care to confess. Who is more of a misanthrope than the subject of the loaded colon? Optimism and pessimism in outlook may be decided by the state of the colon, good temper or bad temper, sunshine or cloud in the domestic circle. Recall, too, the contrast between the clear skin and pinkness of complexion on the one hand and the muddy skin and sallow mien on the other hand, the former associated with the functioning and the latter with the non-functioning colon. And another fact worthy of note is the extraordinary rapidity with which unloading of the lower bowel is followed by relief of general abdominal discomforts and the re-establishment of a sense of well-being.

This responsiveness, this influence for weal or woe, presents the colon to our minds as an organ with a highly developed functional activity closely linked up not only with other portions of the alimentary tract, but with the higher nervous centres. They do not suggest the colon as playing a mere mechanical part, or as a structure of declining importance—a fading evolutionary remnant, to be lightly cast aside as of doubtful utility to its owner.

When we contemplate the many and rapidly changing demands which modern life makes on our digestive system, and side by side with this the exceeding slowness with which adaptive changes in structure evolve, it is small wonder that there is an increasing strain on functional efficiency and that function gives out. This tax on function is in some measure due to the food we eat and the way we eat it, but in perhaps greater measure to the strain and stress associated with the pace of life.

From this it emerges that the determination of disease in part depends on where stress falls, and how far the individual is able to meet the stress. There is a group of people whose abdomens are over-responsive to nerve impressions. Fatigue, fear, anxiety, intensive endeavour, manifest themselves in their hollow viscera, and, it may be, through the agency of internal secretions. So do reflex disturbances. In some, it may be, the stomach is irritable and hypertonic, and secretes too much hydrochloric acid: such are prone to duodenal ulcer. Whereas in others the distal colon is irritable and hypertonic, and has its secretion disturbed: such are prone to colitis. In both of these examples the prime cause of disease is disordered function, and it is curious to note that the first is more common in men and the second in women.

But let such patients take comfort—strain on hollow viscera makes itself manifest and gives warning, and if disease shall follow, such disease is curable. Not so where strain is focussed upon the circulatory system. Here damage is often wrought in silence and even under cover of buoyant vigour, and may not disclose itself until health is irretrievably damaged by the effects of high blood pressure or degenerate arteries. Though I have not collected data to prove it, my own experience has been that colitis is more often associated with normal or low blood pressure than with high blood pressure.

Granted that disease is the interaction between a morbid process and the individual, it is clear that where the individual and his life are primitive, disease is simpler and more constant in its manifestations; on the other hand, when the individual has become highly specialized and sensitive, where he is harassed by the stresses of life and perhaps torn by its struggles, the picture of disease is more complex and varied. Colitis is a striking example of this fact. Not only is colitis a product of modern life, but to a singular degree, in the final presentation of its symptoms and effects in any given patient, it is a composite picture of the physical, the mental, of temperament and character. And by colitis I mean so-called mucous colitis, and exclude all cases where mucus in the stools is associated with organic disease of the colon, such as new growth, and the various forms of ulcerative colitis.

Next, as to the term colitis: if the condition is primarily due to disordered function and inflammation is only an added and not a constant feature, and if the disturbance is not limited to the colon, it might be objected that colitis is a misleading name for the condition. No name, however, has been suggested to take its place, and for complex clinical conditions comprehensive titles are difficult to devise, and we often have to be content with convenient labels. Meanwhile, "colitis" has the advantages of usage, brevity, and therefore of convenience.

THE CLINICAL PICTURE OF COLITIS.

The colonic manifestations are abdominal discomfort or pain, disturbance of the function of the colon as shown by irregularity in its evacuation and alteration of its contents, including the expulsion of mucus, and sometimes of blood or sand.

By variation in their severity, by the ease with which they are provoked and the frequency of their occurrence, the foregoing features produce varying clinical pictures. Thus pain may be acute or paroxysmal, or dull and aching, or, again, there may be a constant sense of abdominal discomfort and misery. Tenderness may be local, general, or absent. Mucus may be passed in casts, as lumps or in stringy form. In some cases the disease comes on in attacks and at long intervals, and the patient is quite well between whiles; in other instances the intervals of immunity are short and even incomplete, and, it may be, to such an extent that the patient is chronically ill and liable to exacerbations of symptoms on the slightest provocation.

The descending colon will be felt to be tightly contracted, and sometimes in addition the caecum toneless and distended. Examination by the sigmoidoscope will not usually at this stage disclose signs of inflammation, which shows that inflammation is not a necessary part of the condition; and in some cases where the mucous membrane is red and swollen such appearances may be evanescent and give place to normal appearances after a short interval. Infection does, in some instances, contribute to the picture, just as it is liable to follow disturbances of function in the urinary and biliary tracts. Such infection may be related to tonsils, gums, stomach, or appendix.

The appendix is seldom the focus of infection; more often it shares an infective process on equal terms with the colon; hence the results of its removal for colitis are commonly disappointing.

Radiography shows the distal colon to be tonically contracted and irregularly segmented. Side by side with this may be disclosed varying degrees of delay—it may be in the caecum, colon, in the lower ileum, in the second part of the duodenum. Further there may be displacements of the hollow viscera, such as a prolapsed caecum and the familiar festooned transverse colon, or again, a movable ascending colon, hairpin bends, and kinks.

With our greater familiarity with *x*-ray appearances in all varieties of cases we know how commonly anatomical irregularities can exist with bowels that function normally. When we recall how coils of intestine kinked and tethered by old adhesions can exist, and acute bends of the bowel be produced experimentally, without causing stasis, we are led to conclude that, provided the musculature of the bowel is efficient, these anatomical irregularities need not count for much, and especially in those portions of the bowel where the contents are fluid. In specimens examined by Keith the lumen of the bowel was not encroached upon, and the coils above kinks were not hypertrophied. On the other hand, delay can exist without the presence of any anatomical abnormality.

* Colitis is used here to denote mucous colitis.

The holding up of the contents of the lower ileum by the ileo-colic sphincter is a part of normal digestion and hypertonicity of that sphincter will produce ileal stasis. In the same way tonic contractions of the descending colon will produce delay in the proximal colon. In short, the immediate cause of stasis lies in the intestinal wall. It is the musculature and its nerve innervation which count, and it is only seldom that anatomical irregularities play an important part.

The importance of this question is great because its rightful determination is necessary to sound treatment. It is of small benefit to perform ingenious operations to replace or fix viscera unless these anatomical variations are causing the symptoms which are in need of relief. That such variations do occasionally cause ill health is undoubted, but their mere existence in conjunction with symptoms difficult of explanation is no proof that they have a causal relation to these symptoms. It is interesting to note how such fixing operations live each its short day, and pass into comparative disuse.

The Involvement of the Alimentary Tract.

The colon is not the only part affected. There are commonly symptoms referable to other parts of the alimentary tract. Thus pain occurs in the epigastrium soon after food, or, again, two hours after eating and relieved by food, so that in making a diagnosis the possible presence of gastric or duodenal ulcer has to be passed under review. Cardiospasm, gastric distension, and flatulence may also be features, and the incidence of these symptoms bears relation to those more strictly belonging to the lower bowel. Thus the onset of the typical spasmodic contraction of the descending colon and increase in mucus will go hand in hand with gastro-duodenal symptoms.

Again, an acute attack will sometimes begin quite definitely in the upper alimentary tract. Such a patient may be tolerably well, when from a slight or unperceived cause there will be an unpleasant taste, a furred tongue, perhaps a red pharynx and epigastric pain, nausea, and distension. The onset of the attack is sometimes suggestive of "protein shock." Such a patient will know by experience that in a few hours his colon will be painful, his stools abnormal, containing perhaps much undigested food and mucus. In other words, the mucous colitis is the final expression of an attack which has swept along the alimentary tract. On such a patient I have had appendicostomy performed. The attacks continued afterwards, but if soon after the onset of the symptoms the patient washed out the colon through the opening the pain in the colon and the passing of mucus would be largely prevented. The washings consisted of undigested food, so the stomach and small intestine were clearly in fault.

Sometimes the order is reversed, and the colon manifestations are followed by gastric symptoms. A colonic dyspepsia is as much a reality as appendicular dyspepsia.

The foregoing observations—and I have notes of many such cases—point to the close inter-relationship of function that exists between the various parts of the alimentary tract. The latter is a finely balanced bit of mechanism—derange one part and the other parts suffer.

Colitis, then, is one phase of a disturbed digestion in which stomach, duodenum, intestine, pancreas may all play a part. Side by side with stress and strain which impair function we find foods and methods of feeding which at the same time overtax it. Whereas the conditions of modern life often require special care in the choice of food, in actual fact the food of the people is in many respects open to more criticism than in former days. The foods that have become popular are not always the best foods. White bread, margarine, the boiling of milk, and the freezing of meat, mean deprivation of those accessory factors which give living power to the food we eat. And vitamin deficiency means not only impaired metabolism, but appears moreover directly to damage digestive function itself. Infection no doubt at a later stage may play an important part, but only gets foothold because the resistance of the tissues has been lowered by damaged function.

The well-known features which the term "alimentary toxaemia" comprises—the sallow dirty complexion, the inelastic and pigmented skin, the "unclean" feeling of mouth and stomach, the dusky lips, the sad eye, the cold extremities, the depressed physical vitality, and the oppressed mind—go far to give character to any given case of colitis.

The measure of toxaemia is variable—being sometimes almost wholly absent, and at other times dominating the picture. Its association with fibrositis and arthritis is well established.

The Over-Responsive Abdomen.

Consider now the patients themselves—observe the difference as to the sex-incidence. Some find females to preponderate largely (Hale-White 85 per cent., Hurst 83 per cent.); others do not (Douglas Wilson 57 per cent.). I rather think the number of males has been increasing in recent years, and, judging by the notes of my cases, I should conclude the percentage of women to be about 70 to 75. The feature which is noticeable with a large number of patients is the over-responsiveness of the abdomen to nerve impressions. They have "barometric abdomens." Fatigue, fear, anxiety, mental stress and strain manifest themselves in their hollow viscera. So do reflex disturbances. Women suffering from the disease often have pelvic disorders which aggravate the intestinal symptoms, and especially during menstruation. Or let these patients have cold extremities (and they often have poor peripheral circulation), especially when they are fatigued, or, again, let them eat when they are cold, and an attack of colitis may easily follow. So much is this the tendency that in dealing with these patients it is part of my routine directions to them never to eat with cold hands and feet, and when they are tired to keep their extremities warm. The effect will sometimes follow the cause with amazing quickness—such quickness as would not give time for any inflammation to develop. I suggest it is rather that reflex nerve disturbance or central nerve disturbance, acting on over-responsive hollow viscera, puts function out of action—certainly motor function, and probably secretory and excretory function also. The rhythm of the intestine becomes disturbed. It is the difference between the regular and the irregular heart, between perhaps normal muscular contraction and auricular fibrillation. Since each zone of the alimentary tract influences the efficiency of the zone below and perhaps above it, if one zone be disturbed the other zones suffer, and thus the orderly sequence of digestion is deranged. Given failure in the function of movement, in the function of secretion (internal and external), and the consequent irregularities of putrefaction and deranged absorption, and "colitis" receives a large measure of explanation.

This over-responsiveness of the abdomen varies in degree. With precautions learned of experience it may, ordinarily, cause little trouble, but should untoward circumstances like over-fatigue, anxiety, bad feeding, occur the colitis symptom-complex may result. But there are some people whose nervous system is cut so fine that the ordinary rough-and-tumble of life is too much for them, and thus are explained some of those examples of intestinal invalids who are never well, and in whom chronic ailing is only varied by recurrent phases of acute symptoms. Such patients are not "neurotic." To call them so is a misuse of the term; they may, on the contrary, be heroic, working and even smiling in spite of the load they have to carry. Whether they become neurotic will depend largely on the considerations set forth in the following paragraph.

The Conscious Abdomen.

If a gastro-intestinal tract is constantly causing aches, pains and discomforts, it gets raised in consciousness, with the result that slighter and slighter disturbances and even its very doings produce impressions and discomforts instead of remaining unperceived. We thus get built on the basis of physical disease a superstructure of symptoms and distresses which flourish on themselves and tend to grow apace.

There is thus a liability of a *conscious* abdomen being added to a *responsive* abdomen, or in other words, of a *state of mind* being added to a *state of body*.

The degree to which this happens in large measure explains the many varieties and intensities of symptoms occurring in patients who suffer from colitis; and here come in the temperament and character and training of the patient. The buoyant, cheerful temperament with a sense of humour will come off better than the inelastic

and sombre temperament. A subject which is introspective and self-centred may be enslaved by the disease, whereas if the subject has the power of sympathetic interest in people and things, can control the mind, and has courage to work, he can, in spite of a colon which is a constant trial, live a tolerably useful life by keeping clear of the worst evils which accrue from the conscious abdomen.

The so-called "neurotic" group consists of those who have developed from their colitis the "conscious abdomen" and have introspective minds.

To be neurotic is no essential part of colitis, though it is small wonder that many of the patients become so. It remains, however, a secondary incident, not an essential feature of the disease. How damaging the "conscious abdomen" can become is illustrated by that well-known type of patient who becomes so analytical of the feelings, doings, and contents of his colon as gradually to abandon aught else and live for his lower bowel.

If I may be allowed to digress for a moment, this consideration of the "conscious abdomen" prompts me to suggest that the profession needs to take up in a large-minded spirit the question of psychical treatment. The patient with colitis who is in danger of being crushed by his illness is not helped by being dubbed "neurotic." Often his physician can help him most by explaining his symptoms, by discriminating between those which have a physical basis and those which are nervous superstructure, those which threaten health and those which only threaten comfort, and in this way restore his perspective. The truth is often more helpful than drugs. The patient's mind can be trained and helped to detach itself, to control what it contemplates, to temper rather than reinforce in consciousness the aches and ills of the body, and thus establish the benign rather than the vicious circle. Such guidance is often given to patients by doctors with the requisite insight and grip, but it is a question whether in this world of hurry more method and system are not needed for this treatment, and there is surely room for those who possess the requisite gifts (and they are rare gifts) to be suitably trained. It is a branch of therapeutics which needs the guidance and restraint of the medical profession. Without such guidance it gathers to itself vanities and pretences which obscure its truth and discredit its usefulness.

It will be interesting to inquire how far clinical facts and considerations fit in with physiological knowledge, and here I turn, in the first instance, to the suggestive researches of Professor Keith.

The myenteric plexus (Auerbach's) possesses special features. In addition to ganglion cells and a network of fine fibres, it contains intermediate cells (nodal tissue) which connect the processes of ganglion cells with muscle cells. The development of the myenteric plexus varies in different parts of the alimentary tract. Thus it is found in greater abundance in the pyloric region and the lesser curvature than in the body of the stomach; in greater abundance in the second part of the duodenum than in the first and third parts; and again, more richly in the distal half of the transverse colon and the descending colon than in the caecum and ascending colon. Further, there are localized concentrations of the nodal tissue—"nodal centres"—at the ileo-colic junction and at the pyloric and cardiac orifices of the stomach.

This nodal tissue has the power of initiating contractile movement. It is the pacemaker of the intestines. The gastro-intestinal tract has been found to be divided into zones—gastric, duodenal, jejuno-iliac, proximal colic, and distal colic. Each of these zones has its own rhythm determined by its own nodal tissue. Where one zone joins the next there is a check or resistance to the peristaltic waves, and where there is a sphincter—for example, at the pylorus or ileo-caecal valve—the check is complete and the peristaltic wave comes to a stop. The rhythm of one zone is closely connected with that of the zones below and above it. The myenteric plexus, in addition to initiating contractility, has also a conducting function, for through it efferent impulses along the vagi and sympathetic nerves are conveyed to the intestinal wall.

Professor Keith aptly compares the nervous mechanism of the alimentary tract to that of the heart. We are well acquainted with tachycardia, irregularity of rhythm, fibrillation, heart-block, and the responsiveness of heart action to extrinsic impulses. Why should not corresponding irregularities occur in the alimentary tract? And if to disturbed motor function we add the supposition of disturbed secretion and the effect of both of these on the intestinal contents, I suggest the clinical phenomena of colitis receive a considerable measure of explanation.

Stasis, though not a necessary, is quite a common feature of colitis. The two conditions often present one and the same clinical picture, and in their pathological findings there is a close resemblance. They are variants of the same morbid state and the same case may be styled colitis by one observer and intestinal stasis by another.

Alimentary Toxaemia.

Although the term alimentary toxaemia presents to our minds a definite clinical picture the mode of production of the condition is obscure.

We may reasonably suppose that a high content of waste products and a damaged intestinal wall are the conditions which favour the passage of toxic products. And these are the conditions which exist in the large intestine in colitis, and sometimes also in the lower ileum. Stasis is not a necessary factor, for in ulcerative conditions of the colon associated with diarrhoea alimentary toxaemia may be a marked feature. Again, strong purgatives, by irritating the intestinal wall, may aggravate rather than allay an existing toxaemia. In colitis there is a retention of contents in the recesses of the colon even when the bowels are open; the latter, in short, do not sweep clean. The degree of toxaemia would depend on the nature of the contents which the colon receives from the ileum, the length of stay of such contents in the colon, and the measure of weakness of the colon defences.*

But in cases of colitis and stasis the colon and ileum are not solely responsible for alimentary toxaemia; for the latter will sometimes persist after ileo-sigmoidostomy and colectomy. The two following cases illustrate this fact; both showed colitis, stasis, and toxaemia.

Case A.

Radiographic examination before operation by Dr. Jordan.

Stomach, enlarged and dropped, emptied in four hours.

Duodenum: Definite delay with dilatation of second part.

Ileum: At the end of eight and a half hours the greater part of the bismuth was in the ileum. At the end of thirty-one hours most of the bismuth was in the ileum and only a small quantity in the ascending and transverse colon.

Colon: After forty-five hours the bismuth was evenly distributed throughout the ascending, transverse, and descending colon. After fifty-five hours the bismuth was in the sigmoid and rectum. After seventy hours evacuation.

There was thus a very definite ileal and colonic stasis. The patient was the picture of colitis and alimentary toxaemia.

The operation of ileo-sigmoidostomy was performed. The same patient was examined a year later (Dr. Jordan).

Stomach: Not enlarged but dropped; peristalsis active.

Duodenum: First part dilated; no delay into jejunum. Bismuth went freely through the small intestine and after seven hours the whole of it was in the rectum; after twenty-four hours, evacuation in one unaided motion. The short-circuit was effective. There was no ileal stasis. The operation was a technical success, yet alimentary toxaemia was still present.

The same patient was examined *nine years after the operation.*

Stomach, rather irritable, was empty after one and a half hours.

Small intestine: After one and a half hours the duodenum was empty and the bismuth massed in the small intestine.

Rectum: In seven and a half hours the bismuth was in the lower sigmoid and rectum, except for a small amount scattered in the colon.

Yet alimentary toxaemia was still a feature of the patient's ill health.

Case B.

This was a case of ileal and colonic stasis, mucous colitis, and alimentary toxaemia. Colectomy was performed. Examination one year after operation.

Stomach: Large and dropped as before; peristalsis normal.

Duodenum: Regurgitation from third to second part.

Rectum: At the end of five hours nearly all the bismuth was in the rectum; at the end of twenty-five hours evacuation.

Thus technically the operation had been successful, but symptoms persisted.

Re-examination Four Years after Operation.—The stomach and duodenum were as before; after six hours the bismuth was in the terminal coils of ileum, and some of these were dilated. After twenty-four hours the bismuth was in the rectum and the

* Graham Brown has described an amine (p-hydroxy-phenyl-ethyl-amine) which is formed in the intestine under conditions of stasis by the putrefactive destruction of proteins through the action of anaerobic bacteria. This toxin is converted in the liver into p-hydroxy-phenylacetic acid, and as such can be found in the urine in cases of alimentary toxaemia. It acts on the sympathetic, producing hypertonus.

last 4 inches of ileum. Toxaemic symptoms persisted, so that at this later date the case was neither a clinical nor a technical success.

Thus, even when the damaged colon is put out of harm's way and prompt evacuation is secured, toxaemia may persist. This means there is a second line of defence—namely, the liver, and that this line may also fail.

The colon and liver would thus seem to have a joint responsibility. In some cases the colon defences may have failed so badly that the flood of toxic products is more than even a normal liver can cope with. Given such circumstances, colectomy should succeed. In other instances the liver has a substantial share of responsibility, and then the results of colectomy will be clinically disappointing, even if technically successful.

It is known that in health during two hours after digestion of a mixed meal unaltered proteins, as well as peptones and amines, pass from the intestine into the portal vein, and that such foreign proteins do not pass the liver defences. If, however, the liver defences are insufficient, such products get through. Is it not likely that the same happens in toxaemia?

In abdominal migraine there is a marked toxaemia which is best explained by supposing that the liver defences are temporarily out of action, and Widal, Abrami, Brissaud and other writers set forth reasons for supposing that migraine is the result of anaphylactic shock. A study of the familiar condition loosely called "chill on the liver" shows a close similarity to the symptoms sometimes produced by a second injection of a horse serum—namely, fever, headache, generalized pains, aching joints, anorexia, nausea, vomiting, etc. Is it not possible that certain attacks of colitis which sometimes light up quickly and without apparent cause may have an anaphylactic origin?

The following case is worth mentioning in this connexion. A patient liable to colitis always has cold reddish hands; at times her hands become blue, and patches resembling angioneurotic oedema rapidly appear on them. This is usually, in the patient's experience, an immediate precursor of an attack of colitis.

This reminds one of the anaphylactic origin of asthma, between which and colitis, as Hurst has pointed out, there are many suggestive parallels—the over-responsiveness of the patient, the spasmodic contraction, the excess of mucus, the liability of an inflammatory factor to supervene in the shape of bronchitis. In its late stages the lung of the asthmatic is inelastic and undergoes atrophic and fibrotic changes similar to those found in the colon in the later stages of colitis.

TREATMENT.

Owing to the complexity of its origin and the variety of its manifestations, mucous colitis is difficult to treat. The coarse food rich in cellulose advocated by Van Noorden is not a success. It irritates the intestine, and is prone to produce gas.

The food should consist of light solids—for example, white fish, first cooked meats, dishes made with eggs, light puddings, etc. Soups should be taken sparingly or avoided. Only a little fluid should be taken with the meals, but sufficient between meals. Fruit and vegetables are a problem; they are often difficult to digest, yet from the point of view of nutrition desirable; mashed potato, cauliflower, and cooked celery and lettuce agree, and of fruits apple is the safest.

In intractable cases the limitation of vegetables and fruit has often to be strict and by some authorities a paste (macaroni) diet is prescribed for a period. The disadvantage of a too restricted diet is twofold—it discourages the patient and is apt to result in an insufficiency of essential foodstuffs and vitamins. The latter may be given separately where foods containing them cannot be tolerated in adequate quantity. Sometimes fruit and even raw vegetable like lettuce can be tolerated if taken alone, whereas they remain undigested if mixed with other food. And, generally, colitis patients do better by taking only two main articles of food (courses) at a meal.

It is important for the extremities to be warm, and especially before eating.

If the body or mind has been engaged in effort, a few moments of repose and relaxation should precede the taking of food. It will often be found that these patients cannot take vigorous exercise of both body and mind on the same day. A business man is often better with only gentle exercise during the week, reserving his physical exertion for the week-end. Where the patient's abdomen is over-responsive the treatment advised should have regard to that fact. Fatigue, stress, and anxiety must be guarded against where possible. Periodic rests, such as a weekly or fortnightly day in bed, helps to secure this end.

A great deal can be done by educating the mind not only to concentrate but to detach and relax quickly. This is an important aspect of treatment. Physical culture holds an established position. Surely psychical culture is of like importance. The power to rest quickly and relax deliberately is essential to those who feel acutely and work strenuously.

Drugs that aid digestion, like takadiastase and pancreatin, do good. Sleep is apt to be disturbed by distensions of the hollow viscera. Bismuth and sodium bicarbonate with carminative, and if necessary a few minims of nepenthe, given at bedtime will help this condition.

Aperients should be gentle, and for clearing the bowel castor oil is the best. Very often little aperient is needed if paraffin is taken regularly, though there are patients in whom paraffin is ejected alone and even incontinently. Special care in the use of aperients is needed when bacilluria exists.

An essential indication is to secure the emptying and cleanness of the colon. This is secured by intestinal lavage. Bismuth in bulk (ʒ ij) administered in bread and milk or jelly taken every week or ten days is often of benefit. It seems to act by scouring the colon. Where there is much fermentation an ounce of wood charcoal may be mixed with the bismuth. Intestinal antiseptics are disappointing.

Where the above measures fail to secure evacuation and cleansing of the intestine, appendicostomy is a sound and safe procedure, and is often productive of considerable benefit.

Colectomy.

Sufficient experience has now been gained to pass the operation of colectomy under review.

The results as a whole have not been encouraging. Apart from its magnitude and therefore risk, the operation seldom restores to a patient anything approaching a normal life. Patients will express doubts as to whether they have gained enough to have made the operation worth while.

As the cases quoted above show, technical and clinical success do not always go together. Further, there are not a few instances where the operation completely fails in its objects and leaves the patient as wrecked, if not more wrecked, in health than before.

Now and again the results are excellent and succeed where previous measures have failed. I have under observation a case in which a transformation was effected by colectomy, and now, after ten years, the patient continues in good health.

The indications for colectomy would seem to be:

1. Where the motility of the colon is so spent that all other measures fail to prevent stasis within it.

2. Where the colon is so damaged in its defences that, in spite of every effort to keep it cleansed, toxic products get through in such abundance as to ruin the health of the patient. But here, too, there is risk that the second line of defence in the liver may be damaged also.

Hemicolectomy.

Hemicolectomy is on a different footing. The operative risk is small, and if it fails in its object there is little risk of the patient's condition being worsened. If the failure of function is in the proximal colon the prospect of success should be good, especially if the ileo-colic valve is preserved in the implanted portion, as has recently been done. Unfortunately, however, there is sometimes too much mischief in the distal colon for the operation to be adequate. When such is the case and a complete colectomy appears to be inevitable, I suggest that it is worth while considering in each case whether colotomy would not be efficient and preferable. The thought of colotomy is, no doubt, in discord with a fine surgical sense, and its performance carries a feeling of disappointment to the surgeon that circumstances do not permit him to do something better. But in relation to this particular problem it has advantages.

It is a simple operation, patients achieve a considerable accommodation to its inconveniences, and, if it fails, further surgical procedures are not precluded.

On the other hand, complete colectomy is the last and irretrievable word; it offers but a modest prospect of success, and its failures, not a few in number, are sometimes apt to be such dire failures as to mean for the patients misery and suffering little capable of alleviation.

ACUTE INFECTIONS OF THE ENDOMETRIUM.*

BY

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IT has hitherto been generally held that those cases of endometritis which give rise to marked constitutional disturbance, where there is often a feeling of chilliness, or even a rigor, the temperature and pulse are raised, the uterus is tender, soft, and boggy, with or without a tubal infection, should be left strictly alone. The treatment in these cases is described as "expectant" or "conservative," but surely, if those symptoms and signs were present in any other part of the body, the call would be for active treatment and not conservative. In such case, where there is pent-up secretion of a septic character, the first principles of surgery would be applied, the abscess opened and drained; but because it is the uterus, the patients are permitted to drag out days, if not weeks, of pain and discomfort, whereas experience shows that by disinfecting the endometrium and draining the uterus, the symptoms and signs can be effectively relieved. In these cases the cervix is septic and oedematous, the mucous membrane lining the canal is swollen and heaped up, the canal tortuous, which prevent any dilatation by surgical instruments. Any attempt at such would injure the cervix, whereas a small catheter, well lubricated, can always be introduced into the uterine cavity without causing injury, the interior of the cavity disinfected, and a way made for drainage.

I have now had considerable experience in the treatment of acute septic infections of the uterus and its adnexa, and be the infection streptococcal or gonococcal, or be it of a septicaemic character, I have rarely failed to relieve those acute symptoms and signs by dealing with the nidus of infection, which is in the endometrium. The results obtained prove to me that these acute conditions call for active and not expectant treatment. The lack of active treatment is liable to lead to the spread of infection from the uterus to the Fallopian tubes, to the pelvic peritoneum, and even to the general blood stream. At the same time it should be carefully borne in mind that it is very easy to increase the inflammation by opening up fresh channels in treating these acute conditions of the endometrium. Experience has shown me that any attempt at dilatation of the cervical canal and swabbing the uterine cavity is only inviting trouble, and, moreover, gonococcal infection cannot be eradicated at one treatment.

These cases must be approached with all the caution that one would employ in opening an abdomen. In performing the operation described below the following points must be insisted upon: All acute cases must be operated on immediately; the structures below the cervix must be carefully cleaned and made aseptic from below upwards; no attempt should be made to catch hold of or pull on the cervix with a volsellum, nor to dilate the cervical canal; and finally, the uterus should be rid of any residual fluid after syringing, and a tube left in for drainage.

Treatment for Gonorrhoeal Endometritis.

1. Three days before operation the vulval parts and vagina must be swabbed out with ether soap and water and saline solution; the bladder irrigated with potassium permanganate, 1 in 5,000, then glycerin 7 parts and iodine (1 in 10) 1 part applied to the vagina. All cases with pyrexia are, of course, operated on at once.

2. The operation must be performed under an anaesthetic, the patient being placed in the lithotomy position.

3. The external parts and vagina are washed out with ether soap and water and saline. The urethra, vagina, and any ducts that can be observed are swabbed out with the solution of iodine and glycerin.

4. A Sims's speculum is introduced into the posterior fornix, then a sponge forceps holding a swab is inserted into the anterior fornix and the cervix manipulated into a central position. A No. 4, 5, or 6 india-rubber terminal-eyed catheter is lubricated with glycerin and passed through the cervix to the upper part of the uterus; this is best done by a special introducer (made for me by J. H. Montague, New Bond Street). Ten c.cm. of a solution of iodine (1 in 10) 7 parts and glycerin 1 part are gently syringed into the uterus. The syringe is lowered and any remaining fluid is sucked out. This is again repeated and the vagina swabbed dry.

5. A soft catheter is then introduced to the fundus of the uterus, the end coiled up in the vagina, and a large swab placed just inside the vulva to prevent the catheter coming out. The swab and catheter are removed in six hours.

6. The patient is kept in bed in the semi-Fowler position and takes plenty of hot water as soon as she is round from the anaesthetic. On the third day the whole of the vagina is swabbed out and left dry. The external parts are kept scrupulously clean. The patient is kept in bed for a week.

7. The treatment is repeated in from two to three weeks, and it generally requires to be done from two to six times.

8. No other treatment is required between the operations.

Results of Treatment.

The results are illustrated by the following cases:

CASE I.

M., aged 25, admitted April 10th, 1921. Patient was sent to the infirmary, having been diagnosed by her own doctor as suffering from acute appendicitis. She gave a history of sudden pain in the stomach and right lower abdomen coming on two weeks previously, which had continued ever since. She often felt sick but did not vomit, had burning pain on micturition, and vaginal discharge. She looked and felt thoroughly ill. The temperature on admission was 101°, pulse 118.

Abdominal Examination.—Semi-fluctuant swelling extending from the right pelvis to within two fingerbreadths of umbilicus, and within one fingerbreadth of the right anterior superior spine. *Per vaginam:* There was marked vaginal discharge; erosion of cervix; uterus enlarged, with impaired mobility in an upward direction. After being prepared she was taken to the theatre and anaesthetized; the lump then felt the size of a large fist. The uterus was syringed out with 10 c.cm. of solution of iodine (1 in 10) 7 parts, and glycerin 1 part. A small india-rubber catheter was left in for six hours and then removed.

The following morning the temperature was 100°, pulse 94; slept well. Slight pains only. Evening temperature normal, pulse 92. On April 12th the temperature and pulse were normal; slight pain only in lump, described as prickly in character. The next day she felt quite well, and on the 14th all pain had gone.

On April 20th examination *per vaginam* showed that the lump had decreased enormously; it was then only the size of a walnut. On this and the two following days the vagina was swabbed with glycerin 7 parts, iodine 1 part. On the 23rd she was anaesthetized and the uterus syringed out with iodine 7 parts, glycerin 1 part; a tube was inserted and removed in six hours. She afterwards slept well, and there was no constitutional disturbance.

On vaginal examination on May 3rd the uterus was freely movable. The swelling in the right lateral fornix was reduced to the size of a thickened cord. The patient was discharged on May 9th.

CASE II.

Y., aged 24, admitted March 5th, 1921. Sent in as acute appendicitis. Complained of pain in abdomen, chiefly on right side and below the umbilicus, which came on two days previously quite suddenly. Vomited several times before admission.

Condition on Admission: Lump felt on right side above inner half of Poupart's ligament. Some tenderness around umbilicus and over McBurney's point. *Per vaginam:* Some yellow discharge, tender swelling in right lateral fornix. Temperature 100°, pulse 102. Taken to theatre, given anaesthetic and uterus syringed out with iodine 7 parts, glycerin 1 part. On examination under anaesthetic the lump was found to be an enlarged Fallopian tube the size of a large orange. Uterus enlarged, erosion of cervix.

On March 6th the morning temperature was 99.4°, pulse 96. Pain was still present, though much less. The evening temperature was 100.8°, pulse 96. The following day both temperature and pulse were normal; there was complete absence of pain and discomfort.

On March 17th, eleven days after operation, the temperature went up to 99°, pulse 112. Pain and discomfort again appeared. She was taken to the theatre, given an anaesthetic, and the uterus was syringed out. The temperature immediately came down to normal, pulse to 84. The lump was now the size of a Tangerine orange, just palpable above the pubis; not tender.

From March 21st to 28th swabbing only was done; on the 31st the uterus was syringed out and drained for six hours.

On April 4th the vagina was again swabbed; tube hard, the size of a thickened cord.

The patient was discharged cured on April 9th. A month later the uterus was firm and the erosion of cervix entirely healed.

* Extracts from a lecture delivered to the Association of the Inspectors of Midwives at the Annual Conference in May, 1921.

CASE III.

R., aged 24, admitted January 17th, 1921, complaining of a thick yellow vaginal discharge, which first appeared two years previously. She also stated that since the appearance of the discharge the menstrual periods, which were previously normal, had become very irregular and lasted usually about seven to fourteen days. Three miscarriages had taken place during the past twelve months.

Condition on Admission: Pain and tenderness in both iliac fossae; slight swelling of vulva; vaginal discharge thick yellow in character. Vaginal examination showed a swelling about the size of pigeon's egg in the left lateral fornix; uterus slightly enlarged.

Result of examination of smear taken from cervix: A large number of pus cells were present with many different kinds of organisms, including some doubtful gonococci, the latter few and far between and showing no typical intracellular arrangement. Not possible to conclude positively that they were gonococci.

Treatment.

On January 18th the external genitals were washed with ether soap and water, and saline, then with glycerin and iodine (equal parts). The following day, under a general anaesthetic, the vagina was swabbed with glycerin and iodine (equal parts), the uterus syringed out with glycerin and iodine (7 to 1), and a catheter inserted, which was removed six hours later. Following this the patient felt quite comfortable; all pain had disappeared.

On January 21st the discharge was considerably diminished, and the patient was comfortable and free from pain. On the 25th the external genitals and vagina were swabbed with ether soap and water, and saline; the vagina was then swabbed with glycerin and iodine (7 to 1). Patient still free from pain.

On February 3rd, under a general anaesthetic, the external parts were washed with ether soap and water, and saline; the vagina was swabbed with ether soap and water and saline, then with glycerin and iodine (equal parts); the uterus was syringed out with iodine 1 part and glycerin 7 parts. The following day there was no discharge present, all pain had disappeared, and the patient was comfortable.

Pathological Report: Many pus cells; a few suspicious diplococci; enormous numbers of other organisms. It is difficult to be certain that they were gonococci in the absence of intracellular distribution.

The patient was discharged on February 12th with the uterus small, firm, and freely movable. There was thickening, but no tumour, in the left lateral fornix. Last menstrual period four days; no gonococci found; few pus cells.

PUERPERAL SEPSIS.

The puerperal infections vary in their degree of intensity according to the vitality of the patient and the virulence of the organism. In the gonorrhoeal type the constitutional disturbance is not so pronounced as in one of a streptococcal kind. But be the infection gonococcal or streptococcal, or be it a mixed infection, the condition has to be treated.

In cases of abortion or parturition which are followed by pyrexia the discussion again turns on the advisability of: (1) Conservative or expectant treatment; (2) active or operative treatment (*a*) by curetting, (*b*) by intrauterine applications and thorough draining of the cavity of the uterus, (*c*) by abdominal exploration and by drainage through Douglas's pouch. It is of course assumed in all cases that the placenta has been removed intact, and that if the uterus contains products of conception, they have been carefully removed.

1. *Conservative or Expectant Treatment.*—In these cases, as I have already pointed out, nothing is being done in the way of treatment, and unless there is free drainage the symptoms do not abate immediately; they are apt to be prolonged, and the signs of inflammation may progress.

2. *Active or Operative Treatment: (a) Curetting.*—In regard to this operation, I am sure that in some cases severe septic extension may be promoted, and such complications as parametritis, exudates in the pouch of Douglas, thrombophlebitis, may be set up. I am therefore of opinion that curetting ought not to be performed, and this also applies to a too vigorous swabbing.

(*b*) *Intrauterine Treatment with Drainage of the Uterine Cavity.*—By carefully following this line of treatment, and by always approaching the cavity of the uterus first, I have formed the definite opinion that this method improves the patient's general condition, that it cuts off the primary focus, prevents the spread of infection, and is the best way of helping the subinvoluted uterus to undergo involution.

(*c*) *Abdominal Exploration or Drainage through Douglas's Pouch.*—Any localized collection of pus should be let out. Collections should be looked for in the inguinal region or the pelvis where they usually point. I might add that during the last twelve months, since I have treated all septic infections of the uterus and its adnexa actively, I have had only on one occasion to operate, and that was for metastatic abscesses of the limbs. The patient recovered completely.

Case illustrating Acute Streptococcal Infection of Endometrium.

The patient was admitted to the infirmary with a history of having had a miscarriage on October 22nd, 1920. Bacteriological report: Smear showed many streptococci. Blood culture showed no organisms.

She had been sterile for five years previously, and in consequence underwent an operation for dilatation of the cervix at the Chelsea Hospital for Women a year before. Her periods stopped absolutely on June 3rd, and she became pregnant. Bleeding commenced about a month later, and she was advised to stay in bed, which she did in the hope of avoiding a miscarriage, which, however, occurred on October 22nd. This was followed by considerable haemorrhage, which became rather alarming, and she was curetted by her own medical attendant about twelve hours later, the whole of the placenta being removed in pieces. After three days she commenced having rigors, at first about three a day and one in the night; these continued for about three weeks, in fact up to the day before admission. The temperature during the rigors went up to 104°, and on two occasions to 105.2°. In between the temperature practically dropped to normal. During this period she complained of a pain in her right side, headaches, noises in the ears, dryness of the mouth, inability to sleep, feeling of sickness but no actual vomiting. She lost a little blood *per vaginam* for the first week, but after that nothing until after admission.

On the day of admission her pulse remained at about 80. The first evening the temperature was normal. The second and third evenings it rose to 99.4°, the pulse to 100. The fourth evening, however, the temperature went down again to normal. There was no vaginal discharge.

On the fifth day, in the afternoon, she had a rigor, the temperature going up to 104° and the pulse to 128. Her pad had shown the presence of a brownish, slightly offensive discharge. On the sixth day she had another rigor, the temperature going up to 103.4° and the pulse to 112. The seventh day there was another rigor, with temperature 103.2° and pulse 132. After this she was given a general anaesthetic, and nothing was done to the uterus except that a No. 6 catheter was passed, without any dilatation, into the uterus, and this syringed out with iodine 7 parts and glycerin 1 part. The catheter was left in as a drain for six hours only. As a result the temperature was normal for nearly forty-eight hours, rising to 102° on the afternoon of the ninth day. On the tenth day a small india-rubber catheter was again inserted in the uterus and left in for six hours, being withdrawn at the end of that time. There was a rise of temperature to 101.6° on the eleventh day. After this the temperature remained normal, and the uterus, which at first was enlarged from before backwards and felt boggy, gradually became firm, hard, and of normal size, with a complete absence of symptoms.

Case of Puerperal Sepsis, Left Hemiplegia, Bronchopneumonia.

The patient was admitted on January 28th, 1921, ten days after confinement. She was extremely ill, with large, tender uterus and foetid discharge. Pathological report: Gonococci appear to be present.

On the two following days she was given vaginal douches. This treatment had no effect on the temperature, so the uterus was syringed out with glycerin and iodine, equal parts, and a tube left in for six hours. The immediate effect was that she began to feel better. The temperature slowly became normal by lysis in five days. She made a good recovery.

Case of Puerperal Sepsis, with Pelvic Cellulitis, following Six Months' Miscarriage.

B., aged 32, who was admitted on April 3rd, 1921, with signs of inevitable miscarriage with sepsis, was delivered naturally of a foetus the following day. On the 5th the adherent placenta was removed under an anaesthetic. The next day the evening temperature rose to 101°, pulse 100; and on the following day the temperature was 104.2°, pulse 132.

On April 8th the uterus was syringed out with equal parts of glycerin and iodine, and a tube left in for six hours. The temperature rose the same evening to 103°, pulse 130; the following evening the temperature had returned to normal, pulse 90.

On April 10th the uterus was again syringed out with equal parts of glycerin and iodine, and a tube left in for six hours. Temperature 104.1°, pulse 102. On the 11th the temperature rose to 103.2°, pulse 120. The following day the uterus was syringed out with glycerin and iodine (7 to 1), and the temperature returned to normal on the 13th, pulse 76. On the 14th the evening temperature rose to 99.2°, pulse 90.

On April 15th the uterus was again syringed with glycerin and iodine (7 to 1) and a good deal of pus drawn off. The evening temperature was normal and remained so the following day. On the 17th the uterus was syringed with glycerin and iodine (7 to 1); evening temperature 101.4°, pulse 102.

On April 20th, at 6 a.m., the temperature rose to 102°; in the evening it was normal. Since then the patient has made good progress.

CONCLUSIONS.

In acute septic conditions of the uterus I am of opinion:

1. That careful treatment of the endometrium and draining the cavity of the uterus does not produce an extension of the existing inflammation but lessens it.

2. That the cavity of the uterus can be approached time after time until the temperature becomes normal, the uterus firm, and the discharge is got rid of.

3. That inflammatory conditions in the adnexa of the uterus are not only no bar to but are an indication of the need for treatment of the endometrium, since the centre of the infection must be therein. This is proved by the fact that the physical signs subside much more rapidly when the uterus is drained than if left alone.

4. That in a large number of cases the origin of the pain and discomfort lies not in the tubes but in the uterus, because it is inflamed and heavy.

5. That unless these lesions outside the uterus are of the grossest kind no operation should be performed, at any rate until thorough methodical treatment of the endometrium has first been tried. Exacerbations of salpingitis have proved far less frequent since I have followed this line of treatment.

I have to thank Dr. Robert Donaldson for the assistance he has rendered me in the bacteriological examinations, and Drs. A. D. Morris and M. J. O'Brien for their loyal help in carrying out my treatment.

THE INTRAVENOUS ADMINISTRATION OF CALCIUM ACETYL SALICYLATE.

BY

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A CONSIDERATION of the many conditions in which acetyl salicylic acid may be successfully employed shows that it possesses both antipyretic and analgesic properties. In acute rheumatism and other acute febrile diseases it frequently has a marked action as a febrifuge, and if given in the very early stages of influenza it often appears to cut short or abort the attack. It is an anodyne and a sedative in most painful conditions, and it is popular with the lay public because it sometimes relieves headache and neuralgia.

Stockman[1] states that the analgesic action of acetyl salicylic acid can only be explained by supposing that part of the drug is absorbed unchanged into the blood stream; Cushny[2] states that part is decomposed into salicylic acid, that part is absorbed unchanged, that the salicylate formed from it exercises its usual action in the tissues, and that there is a further action in headache and neuralgia attributable to the absorption of unchanged acetyl salicylic acid. It appears therefore that acetyl salicylic acid has two separate actions, one being antipyretic and produced by the salicylate content, and the other analgesic and due to the unchanged drug. It occurred to me about a year ago that the analgesic action might be greatly increased if the drug were injected into the blood stream by the intravenous method. I have been unable to find any account of its having been done before.

Acetyl salicylic acid itself is only very slightly soluble in water, but the calcium compound dissolves in water, one part in six. Given by the mouth, its action resembles that of acetyl salicylic acid. The solution has a pinkish tinge and a slight acid reaction to litmus, 1.7 c.cm. of decinormal sodium hydrate completely neutralizing 0.5 of the drug. The solution can be boiled without any chemical alteration. The first samples I used were taken from the powder intended for oral administration. It had a strong smell of acetic acid, and had a marked acid reaction to litmus. I gave only two or three injections of 0.1 gram, as I did not like to give larger doses of such an acid substance. Messrs. Martindale then supplied me with their preparation of tylcalsin in 0.5 gram compressed tablets made without the use of wax or theobroma (substances used to prevent chemical action by atmospheric moisture). The following notes on cases illustrate its action.

1. *Tabes Dorsalis.*—A man, aged 43, had severe lightning and girdle pains. He had had a prolonged course of antisyphilitic treatment with arsenical compounds and mercury; he also had seven intraspinal injections of mercurialized serum, with a diminution of the pains a few days after each injection, but with no lasting benefit. Acetyl salicylic acid by the mouth eased the pain to some slight extent. I then gave him 0.25 gram of calcium acetyl salicylate on September 2nd, 1920, 0.5 gram on September 3rd, and 0.75 gram on the following day. Three days later, on September 7th, he reported that he had no pain in the legs, but pain in the abdomen was severe. On September 21st I gave him 0.75 gram, and on September 28th 1 gram, and he stated that the pain became much easier. On October 5th I gave him 1 gram calcium acetyl salicylate, and I saw him again on the 9th, when he had been at work since the last injection and had had only slight occasional pains. Since that date he has had 1 gram every month, and is practically free from pain.

2. *Tabes Dorsalis.*—A woman, aged 40, complained of severe lightning and girdle pains. She had had a prolonged course of arsensical compounds and mercury, and although it had improved her general condition and ataxia to some extent it had not relieved her pains. Intraspinal injections of mercurialized serum produced intense reaction with relief of her lightning pains for some days afterwards. On October 18th she complained of severe headache and girdle pains, and I gave her 0.25 gram calcium acetyl salicylate. On October 20th she reported that she had had no pains since the injection, but on November 24th she complained of severe girdle pains again, and I gave her 0.5 gram calcium acetyl salicylate. On December 1st I gave her again 0.5 gram, and when I saw her on January 17th she reported that she had been free from pains until a few days before. I again gave her 0.5 gram of the salicylate, and when I saw her on February 2nd she had been free from pains since the last injection.

3. *Interstitial Keratitis of the Left Eye.*—A boy, aged 12, suffering from interstitial keratitis, had been given seven injections of 0.2 gram kharsivan and thirteen injections of 0.2 gram novarsenobillon intravenously, with twenty injections of mercurial cream in half-grain doses intramuscularly, between May 31st, 1917, and January 1st, 1918. On February 24th, 1921, he again attended with a fresh attack of interstitial keratitis of the left eye, with much ciliary injection, ocular tenderness, and photophobia. He was given 0.2 gram calcium acetyl salicylate, and on the 26th the ciliary injection was much less and the pain much easier. On that day he was given 0.3 gram calcium acetyl salicylate, and on March 1st, when he was seen again, he stated that he had been quite free from pain for forty-eight hours after the injection, but the pain returned slightly after that. He was given 0.3 gram calcium acetyl salicylate, and by March 3rd there was slight photophobia still, but all the ciliary injection had practically disappeared, and when seen again on March 5th the eye was quite well.

4. *Acute Gonococcal Iritis.*—A man, aged 32, had had gonorrhoea five years ago, and had been previously treated by myself in 1919 for an attack of acute gonococcal iritis, which lasted nearly three months. Ten grains of aspirin had always given him relief from the pain for a few hours. In July, 1920, he had a fresh attack in the same eye and was treated for two months in France. In September, 1920, he came to me, when he had all the acute symptoms of iritis, and the condition appeared to be as far from recovery as ever. He had photophobia, severe ocular tenderness, and supraorbital pain. On September 25th I gave him 0.2 gram calcium acetyl salicylate, and he then had relief from pain for about ten hours, and although his symptoms returned they were not in any way so severe as before. On September 27th I gave him 0.4 gram, and on the 28th a similar dose of calcium acetyl salicylate; all pain and tenderness then disappeared and the ciliary and conjunctival injection began to clear up at once. When I saw him again on October 11th he was quite well and the instillation of atropine was stopped. Since then there has been no relapse.

5. *Arsenical Neuritis.*—A woman, aged 41, who first attended on August 25th, 1920, had seven injections of novarsenobillon intravenously, the last one being given on October 20th, 1920. She then had four injections of 0.6 novarsenobillon at weekly intervals, from December 1st to 22nd, 1920. I saw her on January 19th, 1921, when she reported that she had severe pains in the arms and legs, extending downwards to the fingers and toes, apparently due to arsenical neuritis. Potassium bromide gr. xx and aspirin gr. x at night were given with no relief. On February 2nd she was given 0.5 gram calcium acetyl salicylate intravenously. On February 9th she reported that her pains had disappeared one hour after the injection and they had not returned; she has been free from pain since then.

In three other cases of tabes dorsalis intravenous injections of calcium acetyl salicylate produced equally good results. In five cases of gonorrhoeal synovitis, in which the knees, shoulders, and ankles were affected, pain was almost immediately relieved and the swelling began to go down after the first injection. The dose given was 0.5 gram every second or third day. In one case of synovitis of both knees the patient, after the first injection of 0.5 gram, was able to carry on his work as a motor driver. After seven injections given at intervals of three days, his knees were quite well with the exception of slight puffiness of the capsules of the joints, which

disappeared two to three weeks afterwards. In three cases of longer duration, although the injections relieved the pains the synovitis appeared to run its usual course. In one case of acute rheumatism with multiple synovitis and high temperature, while each injection was followed by a lowering of the temperature and relief of pain for some hours, no curative effect resulted, and the progress of the disease appeared to be unaltered. She had been given sodium salicylate up to the point of causing deafness and noises in the ears and sickness, without any relief of pain.

The technique is simple: a 1 gram tablet is dissolved in 10 c.cm. of distilled water by boiling in a test tube in order to ensure sterilization; the solution is then cooled and injected into the vein with a glass syringe. It is advisable to inject slowly to allow the solution to mix gradually with the blood stream in order to prevent thrombosis. I have now treated a diversity of painful conditions where other remedies have failed to bring alleviation. They include sciatica, acute rheumatism, tabes dorsalis, interstitial keratitis, acute iritis, gonorrhoeal synovitis, arsenical neuritis, dysmenorrhoea, and severe headache of doubtful causation. In all, 55 cases have been treated. Pain is relieved in half to three-quarters of an hour and the effect persists for several hours and in some cases for days. In one case of acute rheumatism the patient was unable to take sodium salicylate and aspirin by the mouth on account of gastric irritation. Daily injections of 1 gram of calcium acetyl salicylate produced complete freedom from pain for about six hours. For adults the dose usually given is 1 gram.

In no case has there been the slightest ill effect. Following a personal experimental injection of 0.5 gram I noticed within a few seconds a slight acid taste in the saliva and two or three seconds later a sensation of flushing over the whole body with momentary slight tingling in the extremities. These symptoms, I think, are due to an alteration in the chemical reaction of the blood before the acid is neutralized. So far I believe I am justified in claiming that intravenous injection of calcium acetyl salicylate produces a greater and more immediate relief of pain than aspirin given by the mouth, and its administration is not harmful. It will act beneficially in many cases where other remedies have failed, and it can be repeated daily.

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EXTROVERSION OF THE BLADDER:

THE SEQUEL TO TWO CASES.

BY

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IN the BRITISH MEDICAL JOURNAL for April 28th, 1906,[1] were published some cases of extroversion of the bladder, in which a method of extraperitoneal implantation of the ureters into the rectum had been adopted. The first operation was performed on May 12th, 1899, and the method employed was original so far as we were concerned, and indeed has since been termed by Dr. Jaromir Jelinek of Brunn (Moravia) in his exhaustive pamphlet[2] the "Lendon-Peters operation," the late Dr. Peters[3] of Toronto having operated in a precisely similar manner in July, 1899. Dr. J. J. Buchanan[4] of Pittsburg, however, points out that both Dr. Peters and ourselves were anticipated by Bergenhem (Sweden) in 1896, by Pozza (Italy) in 1897, and by Martin (U.S.A.) and Capello (Italy) in 1898. The operation should, therefore, properly be known as "Bergenhem's." As the two patients, whose cases were described at length, have recently died, it was thought that a brief account of their condition during the many years they survived, and of the *post-mortem* findings in one case, might be of interest.

CASE I (DR. LENDON'S).

In the case of this patient the operation was performed on May 12th, 1899, and he died on Christmas Eve, 1920, having thus survived over twenty-one years. The operation was performed when he was only 9 years of age, and as previous operations for the radical cure of large inguinal herniae had involved castration, he showed some of the characteristic features of a eunuch—namely, piping alto voice, hairless face, and childish countenance. He was broad and stout, his maximum weight was 8 st. 3 lb., and height 5 ft. 5¼ in. when aged 23; other members of his family were much taller. He became a barber, a calling for which by temperament he seemed well fitted, and he continued to shave and amuse his customers till he was about 28 years of age.

He remained in perfectly good health for quite nine years after the operation (1899–1908), and he could always hold his water in the rectum all through the night. During the next ten years he had occasional bouts of illness, which included rigors, vomiting, pains in the loins and groins, and occasionally diarrhoea. The attacks were naturally attributed to uretero-pyelo-nephritis, and in confirmation of this idea there was at times some tenderness on palpating the right kidney.

About Christmas, 1918, his legs began to swell. The following January he contracted influenza. From that time forth he began to go downhill. In March, 1919, he got relief from multiple incisions into the dropsical limbs, and this treatment was repeated on three occasions. There was never any fluid found in the belly, but the right forearm towards the end was swollen, and when ill he was troubled with vomiting, but there were no other corroborative indications of uraemia.

He encountered a severe heat wave in December, 1920, and died on Christmas Eve. A very complete autopsy was performed by Dr. C. T. Turner, the urinary apparatus, together with the lower bowel, being removed *en bloc*, and the whole pelvis extracted.

Post-mortem Notes.

The only traces of the genital organs remaining were remnants of the crura of the penis. The bladder was replaced by scar tissue, behind which was some perivesical fat, and the fibrous structures which constituted a strong ligament between the separated halves of the pubes. (This has been well described by Professor Watson in one of our cases previously reported.[5]) The left kidney with its ureter was embedded all the way down in a dense mass of hard fat; it was a little difficult to find the kidney, and very difficult to trace the ureter. The kidney itself was much shrunken, tough, with wasted cortex (1 mm.), and dilated calyces filled with greenish-grey putty-like material. The ureter was 21 cm. in length and of varying calibre—the upper fifth the size of a slate pencil, the middle portion that of a lead pencil, whilst the lower end was strictured and kinked, becoming dilated again at its entry into the rectum on the left antero-lateral aspect, 5½ cm. above the anal margin. Its site was easily found in the rectum by a small polypoid projection.

The right kidney was a complete contrast. Its capsule peeled fairly readily, and its cortex measured 4 mm. There was some dilatation of the calyces, which were filled with semi-purulent material having the characteristic odour of the *Bacillus coli communis*. The right ureter was slightly dilated all the way down, and measured 6 mm. in diameter where it opened into the rectum, 8 cm. above the anus, where its gaping orifice admitted a No. 9 catheter.

Notes on the Pelvis, by PROFESSOR WOOD-JONES.

The pelvis (No. 1) is rearticulated after maceration. The sacro-sciatic notch may be described as ultra-masculine in type. The first three sacral elements remain ununited, and all epiphyseal lines are distinct. The epiphyses for the iliac crests and for the tuberosities of the ischia are separate. The backward rotation of the ilia is not nearly so well marked as in pelvis No. 2 (that of a girl aged 8), but the ilia are still more markedly upright. The sacrum is flattened from side to side and from above downward, but the loss of curvature is not nearly so marked as in pelvis No. 2. Three sacral elements articulate with the ilia, but the first element has been almost completely liberated from the articulation; the first coccygeal element has undergone sacralization. As in pelvis No. 2 there are joints between the laminae of the first two sacral vertebrae; the posterior arches of these two vertebrae are incomplete. The upper articular facets of the first sacral element are of the normal sacral type. The ischio-pubic ramus is slender, and the

large obturator foramen is almost vertical in its long axis. The pubic diastasis measures (in the rearticulated specimen) 31 mm. The distance from the anterior margin of the acetabulum to the free margin of the os pubis is equal to the diameter of the acetabulum.

The upward displacement of the sacrum relative to the pelvis has been noted in other specimens by Ballantyne. It is a very remarkable anomaly difficult to associate with the primary malformation. In pelvis No. 2 it has led only to an abnormally high position of the sacrum, and to the assumption of some definitely lumbar characteristics by the first sacral element. In this case it has led to the almost complete liberation of this bone.

Although the general deformity consists in a splaying apart of the two ilia, it is noteworthy that the pubic diastasis is exaggerated in both specimens by an absolute shortening of the pubis. Whereas in this specimen the horizontal ramus of the pubis measures 63 mm., in a normal male bone of very similar general dimensions it measures 76 mm. Associated anomalies consist in (*a*) general flattening of the sacrum, (*b*) peculiar slenderness of the ischio-pubic ramus, (*c*) general uprightness of the whole of the ossa innominata.

CASE II (DR. NEWLAND'S).

Apart from an attack of measles in 1914, he remained in good health from the date of the operation in 1904 down to the time of his final illness in 1920. He worked on the family farm, and during his brother's absence on active service he managed it. In September, 1920, he weighed 10 st., the heaviest he had ever been.

In October, 1920, he consulted Dr. L. G. Muirhead, of Henley Beach, complaining of general weakness, abdominal pain, and some cough without haemoptysis. No pulmonary or laryngeal condition could be detected. He had complete control over his urine and could pass it irrespective of the act of defaecation. The urine on examination was turbid and contained a good deal of albumin. The kidneys were neither tender nor enlarged.

On his return to the country he consulted Dr. G. H. B. Black, of Showtown, and was admitted to hospital on November 23rd, 1920, complaining of weakness, wasting, and occasional slight pain below the left costal margin. He had suffered from indigestion for several months, and from a cough for several weeks. He stated that occasionally he had difficulty for a day or so in holding the urine in the rectum for any length of time, but as a rule there was no incontinence. He was very wasted; the heart and vessels were natural. Slight pleural friction could be detected at the posterior base of the left lung. The kidneys were neither palpable nor tender. The healed scar of the old operation, in the pubic region, was partly covered with pubic hair. The penis was rudimentary. There was little hair on the face and the voice was falsetto. A filtered specimen of urine was free from sugar.

On December 2nd doubtful signs were detected at the apex of the right lung. On December 10th there were signs of a cavity in the same situation and tubercle bacilli were found in the sputum. A week later signs of consolidation developed in the lower lobe of the left lung. His general condition now rapidly deteriorated, and after an attack of "convulsions" he died on January 15th, 1921. An autopsy was not performed, and therefore no report on the condition of the kidneys is possible.

REMARKS.

The principal object of this paper is to encourage surgeons who may encounter these rare cases in future to operate upon the lines laid down in the communication referred to above,[1] for, if a child of 9, whose left ureter was noticed to be much thickened at the time of operation, can survive in comfort for about twenty years, and follow his occupation for eighteen years till disabled by cardiac dropsy, how much better results may reasonably be expected when clean cases are operated upon before the ascending ureteritis has set in. It would be interesting to learn the ultimate result of the cases reported in your columns by C. J. Bond,[6] Gilbert Barling,[7] Murray,[8] Riddell,[9] Lawford Knaggs,[10] Rigby,[11] Ball,[12] Arumugum,[13] Holman.[14] Mr. Bond's case[6] survived six years, according to a letter from him dated October, 1906, but this may be an error, as in his original report he gave the date of operation as 1903. Dr. Hatch, of Norwich, and formerly of Bombay, wrote of a successful case reported to the East Anglian Branch in 1904. The only cases we can find in recent Australian literature where this method was adopted are reported by Dr. Hamilton Russell, of Melbourne[15]: his three cases gave excellent results. Dr. Stewart McKay, of Sydney,[16] planned an ingenious operation on the old lines of closing in the bladder: he introduced a tube of rectal mucous membrane into the bladder to avoid the ureteral orifices coming into contact with faeces.

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ON THE ESTIMATION OF THE PHYSIOLOGICAL COST OF MUSCULAR WORK:

THE SIGNIFICANCE OF THE RESPIRATORY QUOTIENT IN INDIRECT CALORIMETRY.

BY

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IN an article in this JOURNAL (May 21st, 1921, p. 733) Leonard Hill and Campbell show that in the estimation of the physiological cost of muscular work there is a lack of agreement between the results obtained by the method practised by Waller and De Decker[1] and that recommended by Cathcart. Waller and De Decker base their estimation on the exhalation of CO_2, 1 c.cm. of CO_2 being taken as equivalent to 5.856 calories. In the method described by Cathcart[2] the estimation is based on the absorption of oxygen, the caloric value of 1 c.cm. of oxygen varying with the respiratory quotient—that is, the ratio of the volume of CO_2 exhaled to the volume of oxygen absorbed during the same time. Leonard Hill and Campbell consider that two sources of error in the results of Waller and De Decker are (1) the short duration of the period of taking the sample, and (2) the failure to take sufficient account of the increase of metabolism due to taking food.

The source of error, however, which is inherent in Waller's method is the neglect of the significance of the respiratory quotient (R.Q.) in determining the caloric equivalent of the volume of CO_2 exhaled. According to Waller,[3] one cubic centimetre of CO_2 is equivalent to 5.317 calories when the R.Q. is 0.95, and to 6.396 when the R.Q. is 0.75. In assuming a fixed R.Q. of 0.85, and a consequent constant value of 5.856 calories per cubic centimetre of CO_2, there is ample room for a wide error, even though the other source of error pointed out by Leonard Hill and Campbell were eliminated. On an uncontrolled diet the R.Q. is sometimes as high as 0.95 or as low as 0.75. On special diets it may fall outside these limits. Table I shows the extent of the error that may occur. The subject and the work—marching at 100 yards per minute on a level floor—were the same in both cases. The diet was uncontrolled.

TABLE I.—*Showing Extent of Error.*
Subject accustomed to apparatus (5 minute samples).

Date.	CO_2 exhaled per minute.	Oxygen absorbed per minute.	R.Q.	Calories calculated from Oxygen Consumption Factor varying with R.Q.	Calories calculated from CO_2 output, R.Q. assumed 0.85.
1919. Jan. 8	c.cm. 743	c.cm. 989	0.75	4.69	4.35
Jan. 9	865	960	0.90	4.73	5.07

The energy expenditure in the two cases as calculated from the exhalation of CO_2, assuming a constant R.Q. of 0.85, shows a difference of about 15 per cent., although the real expenditure as calculated by the more exact method differs by less than 1 per cent. The usefulness of this rapid method of estimating the physiological cost of muscular work by simply measuring the CO_2 output is

thus limited to the approximate determination of the relative severity of the work. Waller is, of course, aware of the source of error in the method, though he has probably underestimated the range of error.

Even in the exact method recommended by Cathcart, in which the caloric value of the oxygen varies with the R.Q., care has to be taken to ensure that the R.Q. represents tissue respiratory exchange. Analysis of expired air frequently shows a quotient that is quite fictitious. This erroneous result arises in the following way. In the body there is a large store of loosely held CO_2 which can be washed out by excessive respiratory efforts, or displaced by acid products of metabolism. On the other hand, part of the CO_2 produced in the tissues may temporarily accumulate within the body. In any sudden change, therefore, in the rate or amplitude of respiration or in the rate of metabolism, as in passing from rest to work or vice versa, there is apt to occur a washing out or retention of CO_2 which completely upsets the relationship between the CO_2 output and the rate of metabolism. The oxygen exchange is, on the other hand, much more steady. Hence, when a washing out of CO_2 occurs, there is not a balancing "washing in" of oxygen, and the R.Q. consequently rises. In the same way, on a temporary retention of CO_2 the R.Q. falls. In sudden changes of the rate of respiration, therefore, there may occur wide fluctuations in the R.Q. which are not a true reflection of tissue metabolism.

In connexion with some experiments which were being carried out we found it necessary to determine the nature of the fluctuations of the R.Q. liable to occur in sudden increases or decreases of the rate of work. Our results obtained for half-hour periods of work of moderate severity show that on passing from rest to work the R.Q. immediately drops and then rises, usually above the pre-work level, after which it slowly falls to the pre-work level. On passing from work to rest there is a sharp rise in the R.Q. followed by a fall below the pre-work level. Table II shows the nature of the fluctuations; the work consisted in marching at a uniform rate of 120 yards per minute.

TABLE II.—*Nature of Fluctuations of R.Q.*

Subject accustomed to apparatus.

R.Q.		Calories per Minute.	
94	.....	1.28	Rest.
74	.....	5.33	First minute work.
89	.....	8.44	Third minute work.
97	.....	8.19	Fifth minute work.
91	.....	7.55	Seventh minute work.
94	.....	7.55	Twenty-fifth to twenty-seventh minute work.
101	.....	4.93	First minute rest after work.
98	.....	1.71	Third minute rest after work.
105	.....	2.01	Fifth minute rest after work.
90	.....	1.55	Seventh minute rest after work.
80	.....	1.23	Twentieth to thirtieth minute rest after work.

A rise in the R.Q. shortly after the commencement of work and a sharp rise on the cessation of work have been noted by several workers. The extent and the causes of these have recently been studied by Campbell, Douglas, and Hobson.[4] Apart from these more or less regular fluctuations there occur occasional changes in the R.Q., such as the sudden rise in the fifth minute after work in the above table. These we believe are connected with changes in the rate of respiration. All these changes in the R.Q. are undoubtedly due to the gap that exists between tissue respiration and tracheal respiration. They merely indicate a washing out or retention of CO_2 in this undetermined zone.

From the foregoing considerations it is obvious that any sudden alteration in the R.Q. suggests that the result is vitiated by a wash out or retention of CO_2. In determining the energy expenditure, therefore, it is necessary that the rate of muscular work should have been constant for about ten minutes before the sample of expired air is taken. If the work is very severe a longer period may be necessary. The constancy of the R.Q. at or about the level of the preceding period is the indication that equilibrium between tissue respiration and tracheal respiration has been established, and that the result may be relied on to represent tissue metabolism. It is obvious that in the method of estimating the cost of work from the CO_2 exhalation, results obtained at the beginning of work or immediately after the work stops are of little value. In the former case CO_2 is accumulating within the body, while in the latter it is being washed out. In neither case is there any parallelism between the production of CO_2 in the tissues and the exhalation of CO_2.

The consideration of the R.Q. is of interest apart from the accuracy of the determinations. Krogh and Lindhard[5] have shown that the physiological cost per unit of work is less in the post-absorptive state following a high carbohydrate diet than following a high fat diet, and Orr and Kinloch[6] have shown that following a meal the net cost of the work—that is, the rate of metabolism during work *minus* the rate of metabolism during the preceding rest period—is greatest on a high protein diet and least on a high carbohydrate diet. The net apparent cost of the work therefore depends to some extent on the nature of the material being consumed in the muscles which is indicated by the respiratory quotient.

Note.—The first observations on which the above note is based were made when one of us (J. B. O.) was working with Professor Cathcart, F.R.S., at the London Hospital in the winter of 1918-19. The results of Table I are taken from unpublished results of that period and included here by the kind permission of Professor Cathcart.

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THE CONTROL OF HAEMORRHAGE BY INTRAMUSCULAR INJECTION OF CALCIUM CHLORIDE.

BY

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THE treatment of haemorrhage by intramuscular injection of calcium chloride is gradually becoming a well recognized and useful procedure, but we know of no published results which show what has taken place in the blood, or how long the drug may be acting. Originally it was pointed out in the *Guy's Hospital Gazette* of May 18th, 1918 (W. R. G.), that the credit for the use of the drug is due to Dr. W. E. Dixon. One of us (H. W. C. V.) has now examined the blood after many of these injections, and, though his results will be published later, it seems worth while to publish separately a short statement from the practical point of view.

One grain of calcium chloride is dissolved in about 100 minims of water and injected deeply into the gluteal muscles; it must not be injected subcutaneously or sloughing of the skin will be caused. If a solution of the salt is made up to a concentration of 1 in 4 (2 drachms in an ounce is a convenient quantity), four minims then contain one grain. This solution has been kept for weeks, and in this strength apparently remains sterile indefinitely. If the solution is not quite clear, it must be shaken before use. The four minims are diluted to 100 mm. with boiled water, and in some hundred or more injections nothing abnormal has developed at the site of injection. Generally the injection is painless, though a few patients have complained of pain and stiffness running down the limb. In the blood the calcium value is found to rise slowly to a maximum in six hours, and then to remain practically constant for at least twenty-four hours. It is not at present possible to state definitely the action of calcium salts in controlling bleeding; it is probable that there is a direct constrictor effect on the blood vessels, and, further, the increased calcium content of the plasma may cause combination to occur between the calcium and the blood lipoids, with a consequent acceleration of clotting.

As a practical application of these results it has been found perfectly safe to give a second injection at the end of twenty-four hours, and, if necessary, a third twenty-four hours later; this was actually done in a case of haematemesis. In anticipating haemorrhage at or after operation, an injection not more than two hours before, or even at the time of operation, would seem indicated.

Calcium salts given by the mouth had no influence on the blood calcium; this confirms the observations of Dr. Dixon, from whom this treatment originated. It may

be noted in this connexion that cases of chilblains showed no calcium deficiency in the blood, and the treatment by calcium lactate by the mouth therefore does not seem to be indicated.

The injections are of the greatest service in ordinary haemoptysis, and it is seldom necessary to give more than one dose, though the knowledge that another can be given in twenty-four hours is useful. They are also most helpful in uterine haemorrhages, and the results obtained in aneurysms are hopeful.

The uses are so manifold, the solution so easy to make and keep, and the technique so simple, that when once the effect is realized we believe that the majority of practitioners will carry a solution in the emergency and obstetric bag. We have frequently injected a 1 in 20 solution in an ordinary hypodermic syringe with a long needle, and it is only that we believe that a 1 in 100 solution is more readily absorbed that this strength has become the standard.

Memoranda:

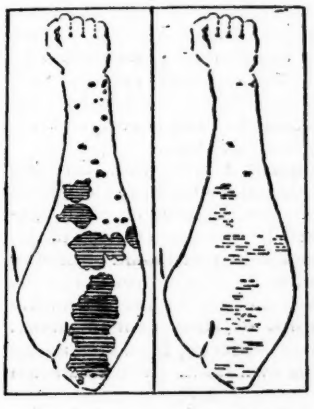
MEDICAL, SURGICAL, OBSTETRICAL.

ACUTE RAPIDLY SPREADING PSORIASIS TREATED WITH ARSENIC.

IN the second edition of *A Handbook of Skin Diseases and their Treatment*, by Professor Arthur Whitfield, King's College, London, the author says, on p. 176: "It is commonly asserted that arsenic should not be administered in acute outbreaks, but, having accepted this on the authority of others for some time, I have convinced myself that though in a few cases it may aggravate the eruption, in the majority of acute cases it is undoubtedly beneficial."

It was decided to test this statement, and the following case of acute rapidly spreading psoriasis, then in the ward, was selected:

A. B., aged 16, apprentice metal worker, was admitted to Ward 2, Edinburgh Royal Infirmary, on April 19th, 1921, suffering from acute psoriasis. According to the patient, the eruption first appeared eighteen months previously as a red spot on the right knee. Spread was slow. Three months before admittance there were "a few scattered spots" over the body and limbs. Twelve months after the commencement on the knee scaliness of the scalp was bad enough to demand attention. From a medical practitioner he obtained a "yellow paste," which he employed at irregular intervals, with little or no benefit. About a month before admission the eruption became much worse.



Dorsal surface of right forearm, April 30th, 1921. Same surface, June 2nd, 1921.

On admission there was profuse scaling of the scalp. There was a red patchy eruption affecting particularly the forehead, face, forearms, lower part of trunk, scrotal region, and lower limbs, and showing a marked preference for the extensor surfaces of the limbs. There was no pitting of the nails, and no involvement of palms and soles.

Treatment was as follows: For ten days the patient had a daily sulphur bath and an application to the scalp of 2 per cent., and to the body of 1 per cent., sulphur and salicylic vaseline. This gave no apparent benefit, and there was considerable spread.

On April 30th, 1921, Fowler's solution was commenced in doses of ♏v thrice daily after food, and detailed charts were made of the eruption on the dorsum of the right forearm and on the right thigh and leg. The sulphur and salicylic treatment was continued. For three days spread went on unchecked. In seven days, however, spread had stopped. The whole eruption had somewhat paled, and thickening had become less marked. Several large patches, especially those on the arms, had lost their well defined edge, and showed small areas of healthy skin in their centres. Seeing and feeling them from day to day caused me involuntarily to make a comparison between them and the idea of islands covered with low flat-topped hills becoming submerged. In a fortnight there was considerable paling of the whole eruption. This was most marked on the forehead and face. The scalp was almost healthy in appearance. A few of the newest spots had gone. Continuing the analogy made above, almost the entire eruption now appeared to be becoming submerged. In three weeks the face, forehead, and scalp showed hardly any evidence of disease. More spots had disappeared from the limbs, and the remaining eruption was now quite pale.

On May 18th, 1921, the sulphur bath was discontinued, and the strength of the sulphur and salicylic vaseline applied to the body was increased to that of the scalp application. On May 23rd, 1921, the arsenic was stopped because an erythematous eruption closely resembling a sunburn, which had appeared twelve days before on the front of neck and chest, was rapidly spreading. The spread stopped within forty-eight hours. The part was kept covered with a zinc paste. Ten days later there was no evidence of this eruption, save for a fine terminal scaling.

On June 8th, 1921, the psoriasis had disappeared, save for a few scattered "hilltops" in some of the larger areas that had been involved. These were in evidence near the elbows, knees, and in the scrotal region. On this day the patient was anxious to leave, for private reasons, and was discharged with the usual instructions concerning preventive treatment.

Dr. Norman Walker, to whom I am greatly indebted for permission to publish this note, considered the case to be of more than usual interest, because it appears to be so widely accepted a rule that arsenic is not to be employed, or very guardedly employed, in such acute cases.

E. FLEMING GRIFFIN, M.B., Ch.B.Edin.,
House-Physician, Skin Department,
Edinburgh Royal Infirmary.

PROCIDENTIA IN OLD WOMEN.

ON reading the discussion on genital prolapse at the recent British Congress of Obstetrics and Gynaecology held at Birmingham, I was disappointed that none of the speakers made any allusion to the operation for complete prolapse of the uterus with accompanying prolapse of the anterior and posterior vaginal walls described below. For this distressing condition I used to perform vaginal hysterectomy combined with anterior and posterior colporrhaphy and perineorrhaphy. I found it was not good. Patients used to return as bad as ever, except that they had no uterus to prolapse. In this experience I see that several speakers at the congress concurred. For many years past I have performed the following operation with uniformly good results, and have seen no case of recurrence after it. I do no vaginal operation whatever. The abdomen is opened in the mid-line above the pubes. Both ovarian arteries are tied. The broad ligaments are separated from the uterus, and the uterine arteries are tied. The uterus is then cut in half antero-posteriorly as far as the internal os. The mucous membrane of the body of the uterus is next removed in one piece from each half with a separate knife, and a Paquelin's cautery thrust down the cervix from above. The two muscular flaps, consisting of each half of the uterus minus its mucous membrane, are then pared down to a suitable size, spread out over the anterior sheath of the rectus and stitched to it by a continuous catgut suture. The peritoneum is then closed round the protruding stump and the recti and skin united in the usual way. The elevation of the uterus in this fashion automatically slings up the vaginal prolapse. The operation is not a severe one and can be done in less than half an hour. It is a radical cure of the condition. No recurrence can take place. I first saw the operation described some ten years ago in an American journal at a time when my operations for this condition were causing me great dissatisfaction. I have performed it ever since, and have never had cause to regret it. I have never seen any other surgeon perform it; nor have I, on questioning our house-surgeons, who come from various parts of the British Isles, ever been informed that they knew of the operation or had seen it done. So I presume it is not a generally recognized operation in this country at all events. Nevertheless it is a good one, and I can commend it for trial by those who have to deal with this condition.

Portsmouth. CHARLES P. CHILDE, B.A., F.R.C.S.

TRIPLETS WITH TWIN FOETUS PAPYRACEUS.

MRS. B., who had had four previous normal confinements, was admitted to the Louise Margaret Hospital, Aldershot, at 9 p.m. on October 8th, 1920; labour pains had commenced four hours before admission. The membranes ruptured at midnight; an examination was made by the sister on duty, who reported that she was very much puzzled by the presenting part.

When I arrived dilatation was complete; the os uteri was occupied by a hard mass with some sharp spicules on

it, one of which pricked my glove; the mass seemed to be attached to the presenting vertex above it; as the head was not advancing, and dilatation was complete, I assisted its descent with forceps. On removing the blades a solid mass, somewhat the shape and size of a kidney, separated from the head, which was now down on the perineum; the mass was then recognized to be a foetus papyraceus, which had been fitting on the foetal head like a bonnet.

A normal male child weighing 7 lb. was next born, followed by its placenta and membranes, followed again by a second and less compressed foetus papyraceus, with an atrophied bilobed placenta with two amniotic sacs, and one chorion; all three were males. The mother and normal child made an uneventful recovery.

The two papyraceous foetuses are in the Museum of the Royal Army Medical College, Millbank, London.

Aldershot. E. L. Moss, Major R.A.M.C.

Reports of Societies.

MILITARY AND CIVIL CO-OPERATION IN PUBLIC HEALTH.

AT a meeting of the Naval and Military Group of the Society of Medical Officers of Health on June 30th Colonel H. W. GRATTAN, C.B.E., D.S.O., A.M.S., Deputy Director of Hygiene at the War Office, read a paper emphasizing the necessity for co-operation between civil and military authorities in matters affecting public health. The experience of the war had proved how great was the value of co-ordinated action in such matters as billeting, sanitation, destruction of refuse, and measures to cope with infectious diseases; it was highly desirable that some scheme should be adopted in order that such co-operation might be simplified in the event of another national emergency. The military command must realize the principle on which the sanitary organization of an area was based. The tendency lately had been to transfer the centre of gravity as regards public health from small urban authorities to county councils, and if the county authorities generally took up this question it would be a great advantage.

Lieut.-Colonel CALDWELL SMITH described how co-operation with the local authorities had smoothed over many difficulties in his own war experience as sanitary officer to a division. In one small town in Essex billets had to be found in two days for a brigade, but with the assistance of the chairman of the local public health committee and the medical officer, complete sanitary arrangements were devised within twenty-four hours.

Major-General Sir W. G. MACPHERSON said that some difficulty arose during the war because the police authorities arranged matters without the sanitary authorities even knowing that the men were coming. In the earlier stages of the war the medical inspectors of the Local Government Board helped very greatly in billeting areas, and their work was gratefully acknowledged by the Army Council.

Sir GERMAN SIMS WOODHEAD agreed that the work done in the war was of a very high order, but thought it might have been even better if a little more attention had been paid to the sanitary side of the R.A.M.C. from the time of the initiation of the Territorial Force, so that the great weight should not have fallen on the shoulders of comparatively few medical men. He wished to see the time when men trained in the army could become eligible, without the necessity of retirement, to fill certain civil posts. They were all members of a great public service, and ought to have a chance of taking part in either branch of that service. Lieut.-Colonel G. T. CATTELL suggested that there should be a military sanitary survey of England, so that particulars as to water supply and so on should be well known to the military authorities. Lieut.-Colonel W. BUTLER agreed that greater consideration should be given to the local knowledge of those who had the necessary training. Surgeon Rear Admiral Sir P. W. BASSETT-SMITH endorsed from the naval point of view all that had been said.

Major HUTCHINSON WOOD spoke of mistakes that were made in billeting, especially in the choice of sites, and hoped that co-operation would prevent such faults in the future. He was afraid that the advice of medical officers had too often been overruled by what he might call the higher authorities in the army. General MACPHERSON remarked, in reply to the last speaker, that the local command and not the medical authorities at the War Office had the selection of camp sites. When the War Office heard of camps badly selected, measures were taken to remedy the matter.

In closing the discussion the President (Lieut.-Colonel H. R. KENWOOD) said that all the speakers seemed to be agreed as to the necessity of organizing some form of co-operation. It was proposed, with the approval of the Director-General of the Army Medical Service, that the Naval and Military Group of the Society should undertake such a survey as had been suggested. Civilian officers had always found the War Office most sympathetic with work done on right lines. It was the peculiar duty of the group to see that the proposals made in the course of the discussion were not lost sight of; he understood that the Director-General was taking a great interest in the matter, and was desirous of receiving any suggestions that the group might offer.

MENTAL HOSPITALS.

AT the annual meeting of the Mental Hospitals Association, held in the London Guildhall on July 1st, a resolution was proposed urging that, pending the complete revision of the lunacy laws, the Government should introduce at the earliest possible moment a short bill authorizing the reception of voluntary boarders in public mental institutions, the setting up, where desired, of out-patient departments in connexion with such hospitals, and the establishment by the local authorities of psychiatric clinics for the treatment of incipient cases. The chairman, Alderman J. G. TAGGART, Lancashire, in commending the resolution to the meeting, said that it was lamentable that incipient insanity alone among incipient diseases should be entirely neglected; no provision was made for its treatment, but the medical profession was helpless in the matter until psychiatric clinics to which affected persons could go voluntarily were encouraged. He knew cases in the asylums of his own district which would never have been in the institution at all had they been taken in hand sufficiently early. An amendment to leave out the reference to psychiatric clinics found very few supporters, but on a suggestion from the meeting the mover of the resolution agreed to incorporate words which provided for the co-operation of the authorities of the general hospitals and infirmaries with the local authorities in the establishment of such clinics. It was the general feeling that the psychiatric clinics must be established in towns, where the ordinary person could easily attend them, and not exclusively at the mental hospitals, which are very often situated in the country. With this addition the resolution was agreed to.

Sir WILLIAM HODGSON proposed a resolution directing that further representations should be made to the Prime Minister, the Chancellor of the Exchequer, and the Minister of Health with regard to the urgent need of an increase in the grant from the Exchequer in aid of pauper lunatics. The subsidy granted by the Government for venereal diseases services was largely to benefit people whose condition was the result of their own misdoing, whereas the pauper lunatic was suffering from a calamity which was not traceable to his own fault. The resolution was unanimously carried.

The Association agreed to raise its minimum subscription from three guineas to five guineas. Alderman Taggart was re-elected chairman of the Executive Committee.

UNDER new regulations adopted in Germany soldiers are to be vaccinated on joining the army and again on the completion of six years' service. After an unsuccessful vaccination three double inoculations are, if it is considered desirable, to be performed in three successive years.

DR. C. L. ALSBERG, Chief of the Bureau of Chemistry of the United States Department of Agriculture, has been appointed Director of the Food Research Institute which is to be established at Stanford University by the Carnegie Corporation.

THE Ministry of Health of the Czecho-Slovak Republic has instituted a number of sanitary centres, consisting of tuberculosis dispensaries, infant clinics, and venereal dispensaries, to which will soon be added departments for mental hygiene, gynaecology, and eye diseases.

Reviews.

GREEK MEDICINE IN ROME.

ENGLAND has produced few specialist medical scholars: we have not had a Daremberg, a Littré, or a Haeser; but there have been many Englishmen who, while engaged in the practice of medicine or surgery, have not forgotten their debt to Greece and Rome. Freind (whose history, written in the Tower away from books, has earned the praise of scholars and is well worth reading) at the beginning of the eighteenth century, Willan at the beginning of the nineteenth century, the learned Scottish country doctor Adams sixty years ago, and, in our generation, Frank Payne, William Osler, Norman Moore, and Clifford Allbutt, have helped to make medical history as well as to write it.

Sir CLIFFORD ALLBUTT'S contributions to the history of thought have long instructed and delighted us. His new book, *Greek Medicine in Rome*[1] includes also some detached essays and addresses, two of which—one being his presidential address to the Clinical Meeting of the Association in 1919—were first published in our columns. Of these papers we shall say nothing, save that they exhibit the enthusiasm for sound learning, the humour and the generosity towards less gifted authors, which have always characterized Sir Clifford's writings.

The greater part of the volume is devoted to the two courses of FitzPatrick lectures upon Greek Medicine in Rome, delivered before the Royal College of Physicians of London. Reports of both courses were published in the BRITISH MEDICAL JOURNAL at the time of their delivery, but in this volume they appear expanded and revised. We may give some general idea of the scope of the book by saying that the author begins by discussing primitive and early Roman medicine, and then passes on to the origins of Greek physiology and to Alexandrian medicine; at p. 176 he reaches the settlement of Greek physicians in Rome, and they and their doctrines are the subject of the remainder of that part of the volume devoted to the FitzPatrick lectures.

All educated men are conscious of the difficulty of rendering a credible account of even the externals of Roman life; they find a certain theatricality in even the best writers. Julius Caesar seems a great man, but hardly a real man in a real world. The reason is, of course, that our information is at once exceedingly full and hopelessly meagre. The most egotistical of our contemporaries will not furnish Macaulay's New Zealander with ampler personal records than Cicero left us; yet if all that awaits that explorer of old London in the form of written matter be an odd copy of the *Times*, he will be better informed respecting various essential facts of twentieth century life than is the most learned scholar respecting the social life of Rome: *alii fortasse aliquid requirent, idque vel maximum.*

If the difficulties of the ordinary historian are great, those of the historian of ideas are greater, and of the historian of medical ideas greatest of all. Nearly half the surviving documents are the work of a single man, a man of great powers indeed and of insatiable curiosity, but as great a partisan as Cicero himself. Galen was separated from Hippocrates by almost 500 years, the works of all those who during these centuries were physicians or physiologists *vom Fach* are lost or survive only in fragments imbedded (as has been the fate of part of Erasistratus's teaching) in hostile comments. The historian is called upon to perform a reconstruction as difficult as that of Cuvier's ideal zoologist using a single bone, and must constantly make allowance for the psychological and cultural factors which determined the attitude of the Graeco-Roman physicians towards that body of knowledge which he only knows by reconstruction. To assert that Sir Clifford Allbutt has succeeded in this herculean task would be for the reviewer to affect an omniscience beyond the vanity of the most olympian journalist. We say no more than that the account of Roman Medicine offered is credible. Sir Clifford has no doubt the defect of his qualities; an anxious desire to do full justice to the work of other scholars prevents him from being dogmatic, and an optimistic reliance upon his readers' knowledge of classical literature may render some chapters hard reading for the average Philistine.

In his estimate of the various schools of medical thought Sir Clifford is not unfair—he is never unfair—to the Empirics, but he does not dwell upon the possibility, it is hardly more, that this school, the name of which became—chiefly through Galen's efforts—the synonym of a quack, had really grasped a principle of *scientific* investigation, a rudimentary form of statistical induction, the neglect of which by Galen and the Galenists did most of the harm which excited Sydenham's wrath. If arguing the point made a doctor, certainly students of philosophy would be the best doctors, but in an abundance of fine words there may be a famine of medical skill, said the Empirics—if we may venture to paraphrase Celsus's remarks—and the Galenists spent some centuries in providing a practical comment on the text.

The name of Celsus reminds us that the reader will naturally turn to Sir Clifford's account of the few Graeco-Roman authors whom we all know—at least by name. Of Celsus he speaks with the respect which that great writer deserves, and awards him what is, from so enthusiastic a Hellenist as Sir Clifford, the highest praise of being "in content and temper wholly Greek." Sir Clifford's worship of Galen is very far on this side of idolatry; the vices of the Greekling and the vanity of the individual are not left uncensured; but if Galen could read that "he was something greater still, and far better, than 'a great compiler,'" that he was "after all the greatest master of scientific method from the second century to Roger Bacon," the vanity which inspired too many of his pages would not be unsoothed.

The moral atmosphere of Roman medicine, which provoked Galen to approve the saying that bandits and physicians differed merely in the location of their practices, has naturally excited Sir Clifford Allbutt's disgust. It has also inspired some pretty irony. "Musa, however," he writes, "was a man of insight and honourable independence of character. He is not known to have helped to poison anybody."

If anything, Sir Clifford is too generous to the public spirit of Roman physicians and hygienists. Perhaps he and Mr. W. H. S. Jones, whom he quotes, are right in holding that much Roman legislation "was due to a genuine desire to alleviate misery," but the medical writers show little altruism. Galen had plenty of excellent hygienic advice for the nobility and gentry, but roundly said that it was idle to lay down rules of hygiene for persons driven by poverty or otherwise to live laboriously (see Kuehn's edition, VI, 82). Ramazzini, 1,500 years later, was claiming no more than his due when he said that nobody before his time had diligently examined or prescribed remedies for the diseases of artificers—that is, that nobody had troubled about the hygiene of a large proportion of those whose labour rendered possible the pomp and circumstance of Imperial Rome.

Indeed, the period which Sir Clifford has selected, although a deeply interesting, is not a very cheerful one. Within it, Jugurtha's prophecy was fulfilled; the purchaser was found and the soul lost. When we have freed ourselves from the theatrical limelight which obscures our view of Roman civilization and thought, we shall discover many disquieting parallels between the third and the twentieth centuries. Perhaps the Roman Empire is not the only one which, having conquered the "Barbarians," has sold itself to itself. But if some such thought engenders pessimism, Sir Clifford's history at least provides a consolation. It shows us that science is indestructible; the balance of forces which made possible the existence of the men whom Hippocrates typified was soon upset, but their work remained. Upon the foundations laid by these master builders, cartloads of bad bricks were ill laid and many generations lived with immense self-satisfaction in jerry-built palaces. But in each age there were some who perceived the difference between foundation and superstructure, and when the palaces toppled down it was not necessary to lay new foundations. That a physician of great experience, equipped with the technical knowledge of the twentieth century, should write such a book as *Greek Medicine in Rome*, is in itself a proof that science (however we define it) is never obsolete, that Hippocrates and even Galen have a message for us yet. They could hardly wish for a better messenger than Sir Clifford Allbutt.

[1] *Greek Medicine in Rome, with other Historical Essays.* By the Right Hon. Sir T. Clifford Allbutt, K.C.B., M.D., etc. London: Macmillan and Co., Ltd. 1921. (Pp. 633. 30s. net.)

CLINICAL MEDICINE.

THE book entitled *Notes on the Medical Treatment of Disease for Students and Young Practitioners of Medicine*,[2] by Dr. R. D. RUDOLF, of Toronto, does not profess to discuss the treatment of all diseases; it strikes a personal rather than an encyclopaedic note, and on this account is all the more attractive, as it conveys the conclusions drawn from a long experience of clinical work. The introductory remarks contain an account of the evolution of treatment from the earliest times, a subject which forms an interesting and, as the author remarks, often a humiliating chapter of medicine; in connexion with homoeopathy's influence in bringing into wide recognition the *vis medicatrix naturae*, it is maintained that Nature is the personification of natural forces, and is therefore neutral and as lief that the man should die as that he should survive infection. In the section on idiosyncrasies reference is made to the case of a nurse who showed symptoms of strychnine poisoning after a hypodermic injection of morphine, and the author, probably without any *arrière pensée*, adds, "Cats usually react thus to morphia, so there is a pharmacological explanation of it."

There is in this volume a happy blending of traditional experience with the most recent knowledge; thus in the full account of digitalis we read that Withering's directions for the use of the drug hold as good as when they were written in 1785, and that in 1915 Eggleston advocated the administration of the total quantity of the drug that may be expected to produce the maximum therapeutic effect, in one or in several, frequently repeated, doses; Canby Robinson's series of 100 cases in which the effect was apparent after an interval of only two to five hours, the maximum result being attained in twenty-four hours and the influence of the drug being maintained on an average for ten days, is quoted. The various preparations of digitalis are discussed and preference is expressed for Nativelle's granules of crystallized digitaline, which consist chiefly of digitoxin. In the account of the present position of venesection it is pointed out that Hippocrates used it, that it reached its acme and was abused early in the last century, when Broussais and Bouillard's opponents accused them of shedding more blood than Napoleon, but that in many cases it still remains the most effective method of treatment available. The value of the principle underlying Freud's psycho-analysis is admitted, and the chapter on the treatment of functional disorders of the nervous system is, like the rest of this well-written volume, the outcome of sound common sense and a long apprenticeship to clinical medicine.

NOTES ON BOOKS.

The Year Book of the Universities of the British Empire for 1921[3] is the fifth edition of an exceedingly useful publication. In a volume of manageable size the Editor continues to compress accounts of the degrees, courses of study, staffs of professors and lecturers, and other essential particulars of every university and university college in the British Empire, from Aberdeen to Hong Kong, and does so in such a successful way that intelligibility is never sacrificed to brevity. In the present edition Swansea College and the new University of Dacca appear for the first time. A new appendix, giving a certain amount of information concerning some foreign universities, is added, and, although there must be many difficulties to face, this section of the volume might well be made a little fuller, particularly in regard to the American universities.

In his *Hints to Pensioners on the Home Treatment of Disordered Action of the Heart*[4] Dr. FRANCIS HEATHERLEY, Chairman of No. 1 Pensions Board, Ashton-under-Lyne, explains in simple language what disordered action of the heart really means, and how it can be cured, so that an intelligent pensioner may know the why and the wherefore of the treatment recommended, and therefore be more likely to persevere with it. He points out that D.A.H. is not heart disease, any more than there is anything wrong with a motor car that becomes a nuisance because the driver exceeds the speed limit, for the driver at fault in D.A.H. is the nervous system, and D.A.H. is one only of the symptoms of neurasthenia, the disease of exhaustion, which is described as a revolution in the body, and compared to the condition of affairs in an orchestra when the conductor faints and all the players act as they please. The influence of toxins in causing neurasthenia is portrayed in familiar terms, and pensioners reluctant to submit to dental treatment are reminded that they would never tolerate in their mouths a large piece of dead and foul bone. The directions, especially those about alcohol, are clear and wise, and Dr. Heatherley may be congratulated on having achieved his object.

In *La Cisticercosi Cerebrale*[5] G. FORNI writes a monograph on cysticerci of the brain. It is based on a study of 440 cases recorded in medical literature, and is chiefly concerned with the clinical lessons to be derived therefrom. After a brief historical survey there follows an account of the etiology and pathogenesis of the disease; a detailed description of the pathological findings in the different parts of the brain affected; a chapter on general symptomatology, with a subchapter dealing with symptoms in relation to the number, form, and seat of the parasite; a fourth chapter on the diagnosis, course, and prognosis; a section on treatment, with a record of 12 cases treated surgically; and, finally, a long bibliography with over 300 references.

[2] *Notes on the Medical Treatment of Disease.* For Students and Young Practitioners of Medicine. By Robert Dawson Rudolf, C.B.E., M.D.Edin., F.R.C.P., Professor of Therapeutics in the University of Toronto. University of Toronto Press. 1921. (Med. 8vo, pp. 457.)

[3] *The Year Book of the Universities of the Empire, 1921.* Edited by W. H. Dawson and published for the Universities Bureau of the British Empire. London: G. Bell and Sons, Ltd. 1921. (Cr. 8vo, pp. 582. 15s. net.)

[4] *Hints to Pensioners on the Home Treatment of D.A.H.* By Francis Heatherley, F.R.C.S. Liverpool: G. Tinling and Co. 1921. (Pamphlet, pp. 15.)

[5] *La Cisticercosi Cerebrale.* By G. Forni. Bologna: L. Cappelli. 1920. (Roy. 8vo, pp. 72. 5s.)

NATIONAL COUNCIL FOR COMBATING VENEREAL DISEASES.

THE sixth annual meeting of the National Council for Combating Venereal Diseases was held at the Barnes Hall of the Royal Society of Medicine on June 28th, when Lord GORELL presided over a large audience.

The CHAIRMAN said that the longer he held the office of President of the National Council the more impressed he was by the importance of its warfare and the value of its organization. The constantly increasing attendances at the treatment centres proved that people were beginning to realize that treatment, to be successful, must be continuous. The educational work was a very hopeful feature of the Council's operations. In one English county alone last year lectures were delivered to nearly 33,000 persons. There were some who alleged that lectures were of little use, but while the purely medical work might be very effective with the present generation there could be no permanent result unless the evil was tackled at the root and the minds of people educated and their sense of social responsibility quickened. The Council had dispatched three commissions to certain colonies and seaports abroad to investigate the conditions obtaining there. In conclusion, Lord Gorell touched upon the controversy which had arisen with regard to the choice of methods of preventing venereal diseases. He had himself conferred with prominent members of the Society for the Prevention of Venereal Disease on the points of difference between the policy of that Society and the policy of the Council, and third-party efforts to bring about a *modus vivendi* were still proceeding. The National Council was perfectly willing at any time to meet the Society in conference provided that no conditions were demanded and that their hands were not tied.

Representatives of the commissions then gave an account of their experiences, repeating in some particulars what had been already stated at the special meeting called recently to consider their reports. (BRITISH MEDICAL JOURNAL, May 14th, p. 716.)

Dr. WINIFRED CULLIS, one of the Mediterranean Commissioners, described the work done in Gibraltar and Malta, and quoted facts in support of the Council's proposed amendment of the Merchant Shipping Act. She warmly acknowledged the invaluable help rendered by the Governors of both Gibraltar and Malta. At the former port the incidence of venereal diseases was higher than in England; in the latter the problem was not serious as affecting the navy or the garrison, and amongst the civilian population the incidence apparently was low.

Dr. A. F. WRIGHT, one of the commissioners to the West Indies, urged strongly that action should be taken to prevent women boarding ships for the purpose of prostitution. The condition of things obtaining in many ports

was beyond description. Treatment ought to be available on every ship putting to sea, and every ship's doctor ought to be competent to give injections. In some of the smaller West Indian islands the provisions made for dealing with these diseases were disgracefully bad. The doctors were not entirely to blame, for they were called upon to do work for which they were not equipped, and their protests were unheeded. In one island dysentery patients were treated in an unscreened filthy ward, swarming with flies, which was next door to the kitchen. Instruments for use in the treatment of gonorrhoea were not sterilized in passing from one patient to another. In another island the poorer women were registered as suffering from venereal disease without any effort to make a positive diagnosis. In one institution which he visited the children slept in a ward "reserved for such odd cases as skin diseases or confinements." The commission, however, had pleasant surprises, and on one island, where many of the medical arrangements were shocking, he came across a beautiful and scrupulously clean maternity home. It was important that the doctors of the West Indies should have facilities for post-graduate instruction. Some of them had been in out-of-the-way places for twenty-five years.

Mrs. NEVILLE ROLFE, educational commissioner to Shanghai and Hong Kong, said that the situation in China was very difficult to deal with, because western customs were superimposed on eastern. There was ample evidence that enlightened Chinese opinion was in favour of the policy of the National Council, and already the visit of the commission had borne considerable fruit. Responsible authorities were now convinced that tolerated brothels must be suppressed in the interests of public health.

Thanks to the chairman and speakers concluded the meeting.

THE PRIVATE CLINIC SYSTEM.

DISCUSSION AT THE ROYAL SOCIETY OF MEDICINE.

THE discussion by Fellows of the Royal Society of Medicine on the private clinic system in Great Britain (BRITISH MEDICAL JOURNAL, June 25th, page 937) was continued on July 4th, when Sir JOHN BLAND-SUTTON again occupied the chair.

Dr. LAPTHORN SMITH said that he had often envied the doctors in Vienna since the time, many years ago, when he spent six months there, and visited a private hospital of 700 beds, all occupied by paying patients. These patients were graded into four classes, from the nobility to the small shopkeeper. Every morning more than fifty doctors were in attendance. Each doctor registered his name on a notice-board as he entered and removed it as he left. The busy doctor sometimes paid from ten to twenty visits in that one building, and was paid for every visit. If he wanted a consultation he only had to scribble a line and send it to a colleague. Each doctor called at the office as he went out and handed his list of patients to a book-keeper, who at once charged the visit on each patient's bill and collected the fee, so that the doctor had not to trouble himself about money at all. Such an institution might be built in the neighbourhood of Regent's Park if only the enormous cost of an ornamental building were avoided, and it was not thought necessary to rear a building which would last a hundred years. The great clinic at Rochester, Minnesota, into which thousands of patients poured, was a plain, square, wooden building, with a passage-way down the centre and rooms on each side, and a large waiting room opposite the plain front door. A very utilitarian building, perhaps, with long pavilions radiating like the spokes of a wheel from the administration room, would serve the purpose well. He described some of the arrangements at the Mayo Clinic, mentioning that on one day when he was visiting there the same serious operation was performed on a wealthy bank president, on a clergyman of moderate means, and on a very poor doctor, and the fees charged were respectively about £1,000, £50, and nothing at all. He believed that the well-to-do would be prepared to pay handsomely for the facilities which they could get at such a clinic—that is, a thorough overhauling by ten or twenty men, who had all the most modern resources of medical science at their command. A clinic of this kind represented a great economy in administration as against a number of scattered nursing homes. Forty nursing homes in London—many of them in unsuitable and airless localities—meant the services of forty matrons and forty cooks, the staff generally had to be multiplied by forty, whereas if the 300 or 400 patients they could accommodate were in one building there would be an immense saving on that score alone. Dr. Smith also described visits to the private hospital at Battle Creek, Michigan (where he discovered that the profits for the previous year were £12,000), and at Baltimore, where the patients first saw the chief of the clinic at his consulting room and were then sent to a large nursing home, where from five to fifteen specialists called upon them during the following week. There was no provision here, however, for any but the rich. In London he would suggest that two distinguished members of the medical profession—the one a physician and the other a surgeon—should form around them a team of young men and float a company, in which not only the members of the team but the profession at large might be asked to take up shares.

Dr. C. O. HAWTHORNE pointed out that the schemes presented on the occasion of the previous discussion differed widely from one another. What was a group clinic? Was it an expensive building, such as had been suggested by Mr. Dickie, and commended by him as a promising investment, or was it the scheme now actually in operation under Dr. Hurst—if so, it was not a true group, according to Sir Thomas Horder's definition—or was it an association of practitioners, as sketched by Sir Thomas Horder, held together by some vague financial and professional relationship? Until the group clinic was better defined, a vote for a group clinic was a vote for a phrase. He insisted that the aim of medical practice was entirely different from that of medical research, and that to argue that methods appropriate in the one case were necessarily so in the other was fallacious. There was no objection to combination in medical practice, provided only that the controlling influence was the welfare of the patient, and that the authority and responsibility of the individual medical practitioner were not obscured behind a crowd of counsellors or by an anonymous institute or organization. If Dr. Hurst's scheme was group medicine, group medicine was already in operation for every practitioner who sent sputa to be examined by a neighbouring laboratory. Another development advocated by various speakers was the establishment of an organization where an abundant supply of practitioners representing all the talents would be always on hand, and the patient would be passed from room to room and floor to floor until every pathological process of which he might be guilty had been brought to light, when in due course the diagnosis, determined perhaps by the majority vote, would be communicated to him by a new type of medical official called an assessor. But the ideal medical adviser would be one who was able to view and to deal with his patient as a whole. Such an adviser would be competent, upon the basis of complete and first-hand knowledge, to apply an inclusive and self-consistent scheme of medical advice and treatment. Surely a sound policy would aim at getting as near to this ideal as possible. The training, both before and after graduation, of a medical practitioner who desired to accept the responsibility of giving advice to patients should be directed to the acquisition of the widest possible knowledge and skill. The group system had a tendency in exactly the opposite direction; it urged men to be competent, not as advisers of patients, but as examiners of organs. They were told that this group system was simply the application to private practice of the methods universally adopted in hospital practice. The comparison was entirely misleading. The hospital patient was not the patient of an institution or organization or group. He was the patient of an individual medical practitioner who was responsible for him, and who could, if he judged it necessary, request the opinion of colleagues; but he could also refrain from doing so, and in any event he acted upon his own judgement. The hospital officer was free to develop his own knowledge and skill in any direction and to any extent. The freedom of the practitioner in reference to his own patient and to his own development in knowledge and skill was quite impossible in the system which had been

sketched; under the pressure of the rights of colleagues he would be compelled strictly to confine himself to his own definite department. Would a physician be sufficient to represent medicine, or must the group include such sectarian activities as were indicated by the titles, neurologist, cardiologist, gastrologist, endocrinologist? The more complete the group—that is to say, the more multiplied the departments—the greater the restriction upon the freedom of each individual member and the more narrow and limited his view of the patient. It must increasingly follow that no member of the group would be competent to act as medical adviser. The members of each group also must be loyal to one another, which meant that no member could pass by an immediate colleague in order to get the opinion of a member of a rival group. The group system was bad, therefore, for those practitioners of medicine who desired to qualify themselves as advisers of patients. He had nothing but respect for practitioners who had other ambitions, such as to become expert in the application of certain precise instruments in diagnosis, but the value of these methods was in the wide distribution of them, not in their detachment. As the group clinic had yet to be defined he must vote against any general motion which might be proposed in its favour.

Mr. A. W. SHEEN claimed, in opposition to the last speaker, that every piece of medical practice was a piece of medical research. He believed thoroughly in some system of group medicine, which he recognized must come about gradually and tentatively. The advocates of group medicine were not seeking to apply a cast-iron system over the whole country. In a good many parts of the country there were already smallish hospitals with private wards and with the services of consultants from near-by populous centres available, and these satisfied most of the requirements of the clinic.

Dr. STANLEY GEORGE believed that the establishment of private clinics would facilitate the diagnosis and treatment of disease. If the ultimate goal was prevention rather than cure, all energies must be combined and all instrumental aid must be available. He did not think very elaborate instrumentation a necessity of such clinics. This would belong to university laboratories; in the clinic the main thing would be to correlate laboratory and clinical observation.

Dr. C. F. HARFORD said that since the war clinics had been rising up in haphazard fashion—such as school clinics and pension clinics—all of them in connexion with public work. Was private practice to go on in the old-fashioned way? He thought that the report of the Consultative Council was the most statesmanlike thing put on paper, but it had been killed by its diagrams of beautiful buildings, which he believed were only illustrative and not fundamental, the personnel being far more important than the building in Lord Dawson's scheme.

Dr. CHARLES GRAY said that team work was necessary because medicine had extended so enormously that it was impossible for any one man to give the patient what he ought to have in any case requiring thorough investigation.

Dr. CARNEGIE DICKSON, speaking as a pathologist and bacteriologist, who refused to see any patient not sent by a practitioner, said that he regarded himself already as a member of a very large number of different teams. But closer association within the team was necessary. He had seen and appreciated group work in the R.A.M.C., where, once a week, all gathered in the commanding officer's room and discussed difficult and interesting cases. One of the difficulties in group medicine, he thought, would be the division of the fees. A special stumbling-block was the earning capacity of the surgeon. The surgeon had a considerably larger fee than the physician upon whose decision the operation depended. The pathologist's life (said Dr. Dickson in conclusion) would be rendered much more tolerable by the group system, because if he were on the spot and in intimate touch with his colleagues he could prevent errors in collecting specimens which at present made useless half the specimens sent to him by practitioners not specially instructed in the art of obtaining them.

Sir THOMAS HORDER, who had opened the discussion on the previous occasion, confined himself in his reply to rebutting the criticisms of Dr. Hawthorne. Dr. Hawthorne had complained of lack of detail and definition. But the scheme for group clinics was not intended to be precise, and if an attempt at precision had been made would not they who had advocated the scheme have suffered even worse things at Dr. Hawthorne's hands? Dr. Hawthorne's distinction between practice and research was a fallacy. Was it not the modern tendency to combine rather than to divorce practice and research? Was not the magnificent work of the Medical Research Council due entirely to the practice afforded by the war? So far from having been made enthusiastic for group medicine by what he had seen in the States, his ardour was rather damped there, for the clinics in the States were so huge, and (always excepting the brothers Mayo personally) they were not run with that philanthropic spirit and that freedom from financial interest which some of those on this side who favoured the American plan were inclined to assume. If the group system of investigation and treatment became a reality, he for one was not at all sure that he would not regret it quite as much as Dr. Hawthorne. It would be with sorrow that he gave up individual practice and sunk his individuality into the group; but that did not prevent him from investigating the subject, nor from arriving at the conclusion that the modern demands of medicine and of the health of the community made it desirable that group medicine should be encouraged.

Sir THOMAS HORDER then moved a resolution, which was seconded by Dr. DRURY PENNINGTON, as follows:

> That in the opinion of this meeting the time is ripe for the formation of group clinics in this country, and that sympathetic encouragement should be given to them by the profession and by its governing bodies.

Sir THOMAS HORDER, in reply to the PRESIDENT, said that there was no ulterior motive whatever behind this resolution.

The PRESIDENT said, in answer to a question, that it must be understood that the resolution was not that of the Royal Society of Medicine, but only the resolution of the Fellows present on that occasion.

Dr. HAWTHORNE moved, and Dr. M. I. FINUCANE seconded, an amendment:

> That until a precise definition and details are submitted this meeting prefers to abstain from pronouncing an opinion on any suggested modification of the existing methods of medical practice.

The amendment was lost, and Sir Thomas Horder's resolution was carried by 16 votes to 6.

RESEARCH DEFENCE SOCIETY.

THE annual general meeting of the Research Defence Society was held at the house of the Medical Society of London on June 29th, Lord LAMINGTON, President, in the chair.

The PRESIDENT expressed the regret of all members of the society that, owing to ill health, Mr. Stephen Paget had resigned the honorary secretaryship; he had consented to act as vice-chairman of the committee, and would be succeeded as honorary secretary by Dr. Daniel T. Harris. The society still had to encounter opposition, but an increasingly large body of people realized that the infliction of cruelty was the very last thing which the society wished to defend. It was essential that the society should be as strong as possible, to withstand any sudden wave of sentimental feeling, based not on logic, but on emotion. On the motion of Viscount KNUTSFORD, the annual report was adopted. This showed that a large amount of valuable literature had been circulated during the year, and many lantern lectures and addresses delivered. It was agreed that the subscription for members should be raised from 5s. to 10s.

THE NATIONAL INSTITUTE FOR MEDICAL RESEARCH.

Dr. H. H. DALE, F.R.S., then gave an address on the National Institute for Medical Research, which comprises the Central Research Laboratories under the Medical Research Council. He reminded the meeting that the Medical Research Fund, which the Council administered, was originally established by the National Insurance Act, and the sum of money annually available was assessed according to the number of insured persons. While the major part of the Fund was employed for supporting

medical research in existing hospital and university laboratories, the Committee which was first appointed to administer the Fund decided that a substantial sum should be devoted to the formation of a new central institute, staffed by workers who should be in the Committee's whole-time service, but free to receive other workers. The building and grounds at Hampstead, which had been the Mount Vernon Hospital for the treatment of consumption, were purchased, and the first members of the Institute staff were appointed in the middle of 1914. During the war the building became a military hospital, and it was not until April, 1920, that the members of the staff could begin work at the Institute. Meanwhile, with the absorption of the Health Insurance Commissions into the Ministry of Health, the Medical Research Committee was succeeded by the Medical Research Council, which administered a Treasury grant, and was responsible to a Committee of the Privy Council. The Institute, therefore, had only been in existence as a working institution for a little over a year. Much of the time had necessarily been spent in planning and preparation, and the story he had to tell was one rather of hope than of finished achievement.

Investigations on Antitoxic Serums.

The staff of the Institute was organized in four main departments, each with its director. These were the departments of Bacteriology and Experimental Pathology, of Applied Physiology and Hygiene, of Biochemistry and Pharmacology, and of Medical Statistics. Many of the workers in the departments, when they began their labours at the Institute, were still engaged in problems arising out of their war work. Under the stress of war conditions detailed investigation along established lines was largely thrown aside, but peace brought the opportunity for more thorough exploration along routes which a hasty war-time survey had marked out. To give one example, the shortage of the common constituents of bacteriological media led Captain S. R. Douglas, now in charge of the Bacteriological Department of the Institute, to devise, early in the war, a simple method of making such media by pancreatic digestion of meat or other protein materials; the method had become established as a valuable aid to all kinds of bacteriological work. The necessity for making bacterial vaccines in large quantities led Captain Douglas to investigate the value for this purpose of bacteria killed, dehydrated, and freed from their oily constituents by extraction with pure acetone; here again he found a method of wide application and usefulness. Possibly a combination of the two kinds of experience led him next to try the effect of the pancreatic ferments on the acetone-extracted bacteria. The result was already full of promise, giving, perhaps, the long-sought method for extracting from many bacteria the poisonous substances which they liberated when they underwent digestion by the ferments of the blood and tissues, and which were responsible for the symptoms constituting disease. Captain Douglas's work, growing out from his experience during the war, and projected into the conditions of peace, gave hope of a real step forward in the direction of obtaining serums of higher and of definitely measurable value.

Silica and the Germination of Tetanus Spores.

During the war no sufficient explanation seemed to be available of certain facts concerning the growth of the tetanus bacillus and the production of its toxin in the body, for while a suspension of washed tetanus bacilli or their spores could be injected without harm, if soil was introduced with them they would germinate and produce the toxin. Dr. W. E. Gye, who, with Dr. Cramer, was engaged in investigating the subject, found that two common constituents of the soil—calcium chloride and hydrated soluble silica—had the property, when either of them was injected with tetanus spores under the skin of a mouse, of providing the necessary condition for the germination of the spores and the production of the disease. This investigation directed attention anew to another condition with which the presence of silica had long been associated. The fact that working in air impregnated with siliceous dust led to injury to the lungs and predisposed to pulmonary tuberculosis was already known, but a clear understanding of why the presence of silica in the lungs should lead to fibrosis and predispose to tuberculosis was not forthcoming. Dr. Gye and Dr. Kettle had been able to show that the tubercle bacillus, which normally in the tissues of the mouse caused at most a localized nodule of infection, when injected with silicic acid caused a rapidly spreading infection in the tissues which the silica had injured. This opened the possibility of a new light on the problem of the phthisis of tin-miners, gold-miners, knife-grinders, ganister workers, brickmakers, and others.

Disseminated Sclerosis.

Another example of work which, in Dr. Gye's hands, was giving great promise, was the investigation of disseminated sclerosis, which had been supposed to be a derangement of the central nervous system due to an inherent defect. Dr. Gye's evidence was that it was due to a definite infection, since the affected nervous matter or the cerebro-spinal fluid from a patient when injected into rabbits could transmit the disease and evoke the characteristic lesions of the nervous system. He would be a rash man who would prophesy with confidence, but at least there was a line of investigation to pursue, for here was an infection with an organism to be discovered, its channel of entry to be identified, its means of access to be removed, and the methods for its elimination to be explored.

Other Work.

Dr. Dale touched briefly on other work proceeding at the institute. Professor Leonard Hill was at work on the conditions of ventilation and surface cooling (which at the moment did not need experiments on animals). Dr. Brownlee, in the statistical department, took his material chiefly from the large-scale experiments which our ignorance allowed nature still to make on our fellow men. Mr. Barnard was investigating the minute structure of micro-organisms by means of the most recent developments of microscopic and photographic technique. Mr. Dobell had made a critical survey of the protozoological examinations made on excreta, which had revealed the unexpected presence of the amœba of tropical dysentery in a material percentage of healthy Englishmen. While none of these lines of investigation involved experiments on animals, their value and significance depended on knowledge which could not have been attained without such experiment. Dr. Colebrook had been working on actinomycosis, others of the staff on shock in wounded men and the significance of the capillary circulation in connexion therewith, and others again on anaphylaxis. A very important task was the control of the activity and toxicity of some of the modern potent remedies, such as salvarsan and its analogues, which could not by any known chemical test be guaranteed as invariably safe for use in human therapeutics. He need not tell his audience that such remedies were discovered by experiment on animals, but he was not sure whether it was generally realized that there was a large and growing class of them which could not be used at all with any confidence in their efficacy or safety if their quality were not subjected regularly and systematically to the test of experiment on animals. It was hardly creditable to this country that we had hitherto possessed no publicly recognized organization for the control of such remedies, but to the limited extent to which the present state of the law and the willing co-operation of British manufacturers made it possible, such control was already being exercised by a department of the National Institute. The Institute always welcomed genuine and well-informed criticism, but its staff would be false to their trust if they spent the time which the Government paid them to give to research, in controversy with ignorance which no truth would convince.

A vote of thanks to Dr. Dale was heartily accorded on the proposition of Sir LEONARD ROGERS, seconded by Professor W. M. BAYLISS, and supported by Lord KNUTSFORD.

AT the recent half-yearly examinations held by the Sanitary Inspectors' Examination Board 35 candidates were approved and have been certified as qualified to discharge the duties of sanitary inspectors. Of the successful candidates 3 received instruction at the Royal Sanitary Institute, 3 at the National Health Society, 4 at King's College for Women, 21 at the Battersea Polytechnic, and one at the Hackney Institute; the 3 remaining candidates were in office.

COMPLIMENTARY DINNER TO DR. ADDISON.

DR. ADDISON was entertained at dinner on June 29th by a large number of ministerial and parliamentary colleagues, secretaries of departments of which he has been the head, members of the medical and pharmaceutical professions, persons engaged in national insurance organization, and many personal friends. Lord CARSON presided over a company which numbered about 160, and included Lord Milner and Lord Illingworth and about twenty-four members of Parliament. The medical men present were: Dr. G. C. Anderson, Dr. R. A. Bolam, Sir Anthony Bowlby, Dr. H. B. Brackenbury, Dr. Alfred Cox, Mr. E. D. D. Davis, Captain W. E. Elliot, M.P., Dr. A. C. Farquharson, M.P., Dr. M. I. Finucane, Dr. C. E. S. Flemming, Lieut.-Colonel F. E. Fremantle, M.P., Dr. M. H. Gordon, Mr. Bishop Harman, Dr. Alexander Macphail, Dr. E. S. Pasmore, Lieut.-Colonel Nathan Raw, M.P., Dr. J. J. A. Sherry, Dr. T. W. Shore, Professor Arthur Thomson, Dr. Edward Whelpton, and Colonel A. S. Woodwark.

Lord CARSON, in proposing the health of the guest, said that for many years Dr. Addison and he had scowled at each other across the floor of the House of Commons. But those scowls quickly disappeared under the test of war and in the mutual affection for the country which was manifested in her time of peril. That banquet had no political complexion; they knew nothing about those political crises which arose or were manufactured on occasion with regard to individuals, and had nothing to answer to headlines in the newspapers. But they were desirous of showing that through good report and ill Dr. Addison had many staunch friends left. (Applause.) They were present to bear testimony to the honest and zealous work which he had done in the interests of the community at large. Dr. Addison had held many offices, always with distinction to himself and benefit to the public. Lord Carson referred in particular to his energy and resourcefulness as Minister of Munitions in 1916, when he presided over the largest of all the war organizations. Afterwards he became the successful founder of the Ministry of Health. Health was not a subject which drew an enthusiastic assembly in the House of Commons, but that did not make it less important. Looking back on the political and party contests of his public life, he felt that they had had more excitement and interest over questions which ultimately meant nothing than over those radical changes which went to the roots of the happiness of the people. When the bill setting up a Ministry of Health was brought in he noticed that Ireland was left out, and he went to their guest and pointed out this omission, whereupon Dr. Addison adapted the bill so as to lay the foundations of a Ministry of Health in Ireland. Happily, said Lord Carson in conclusion, they were not writing Dr. Addison's obituary, and he for one looked forward with much interest to his future career.

The toast, which was given musical honours, was supported by Sir HENRY BIRCHENOUGH, K.C.M.G., who served under Dr. Addison at the Ministry of Reconstruction during the greater part of his occupancy of that office, where he found him "as ready to listen as to direct"; Dr. R. A. BOLAM, Chairman of Council of the British Medical ASSOCIATION; Sir THOMAS NEILL, Chairman of the Consultative Council of Approved Insurance Societies, and Sir ERNEST MOIR, who spoke from intimate acquaintance with Dr. Addison's work at the Ministry of Munitions.

Dr. BOLAM said that he had the privilege of speaking on behalf not only of his own but of the allied professions. He valued the opportunity of paying a tribute to Dr. Addison's work and worth. Members of the medical profession remembered that he had left a brilliant career as anatomist and teacher in order to enter the councils of the nation. At that very moment his old school (St. Bartholomew's) was wanting an anatomist, but it was too much to expect, he supposed, that after his experience of the larger service of the community he would care to go back to the narrower field. As a private member of the House of Commons from 1910 to 1914 Dr. Addison was always accessible, and always ready to give good advice, and if they did not follow his advice they found generally that his forecast of the feeling of Parliament was justified by the event. No one had the pulse of the assembly more surely under his finger. During his brief tenure of office as Parliamentary Secretary to the Board of Education, they approached him often on the subject of the school medical service, and found his ideals high and his policy in accord with their own. Subsequently, there came a very crucial time for the medical and allied professions in connexion with the National Insurance Act. It was a very important thing that this country should have a medical service cheerfully given and commanding the bulk of the profession, one which also should commend itself to the other professions involved, and they found in all their communications very valuable advice from Dr. Addison, who spared no effort in pursuit of a policy which he was convinced was sound and for the good of the nation. When he disagreed with them his criticism was candid and straightforward. The crown of Dr. Addison's achievements, however, was his creation, while Minister in Charge of Reconstruction, of the Ministry of Health. In raising that edifice he had done work which would abide for many generations. The Ministry of Health was the logical foundation of the whole health structure of the nation. It was earnestly to be hoped that no hasty legislation in these difficult times would undo what had already been accomplished, or in any way reduce the importance of the Ministry or impair its efficiency. Seven years ago Dr. Addison had said that the road of political life was uneven and sometimes hard, but that for medical men, at any rate, political life offered unusual opportunities for helpful service. It said much for Dr. Addison that, knowing as he did the difficulties and dangers of this new venture, along a path which had not been thoroughly surveyed, he should have had the courage to take up the work of first Minister of Health. In conclusion, Dr. Bolam said that the feeling of that gathering would be the feeling of generations to come, and that a calm judgement of the work of Dr. Addison would proclaim that he had added to the lustre of our national life, and had done great work for his country.

Dr. ADDISON spoke feelingly and briefly in response. He said that his friends had set him a hard task, but then, they were his friends, and they would not expect him to do more than give a very imperfect expression of his gratitude. There could be no better reward for a public man than that friends with whom he had worked in the close association of official life should come together to do him honour. He himself had been greatly helped during his occupancy of ministerial office by the knowledge and experience of many at those tables, and not their knowledge and experience only but their steadfastness and courage. However bewildering and difficult the times might have been, the British quality of resolution was always to be depended on, and comfort might be drawn from the reflection that beneath all the froth and fume of passing events this fixed quality would be a sure support in the future. This country was happy in its wealth of men who gave themselves freely to public service. Novel and difficult as were the tasks thrust upon the Ministry of Munitions it was always possible to find somebody who knew what should be done and was ready to do it. His friend Dr. Bolam had reminded him that the same was true in medicine and the allied professions. Frank as had been their conversations with one another, there had never been lacking a willing co-operation both in medicine and pharmacy. The same was true of the approved societies, to the leadership of which he would like to pay a tribute. One other group of his fellow workers to whom he wished to refer were the civil servants. Whether a Ministry had to deal with hogs' bristles or the financing of some contracts in a city across the seas, whether it had to deal with textile imports or infant welfare centres, it was always able to lay its hand upon some man in the Civil Service who would undertake the job. The versatility and ability of the Civil Service was not always appreciated. Unlike their political chiefs, our civil servants had not the embarrassment of publicity. Their willing co-operation was one of the brightest features of our public life. For his own part, he had had great joy in the work itself and the associations which the work had formed; the years had flown by, for the work was of such absorbing interest. That evening they had given him reward and encouragement far beyond what the average servant of the public had any title to expect, and their kindness would be to him a precious recollection. (Loud applause.)

The only subsequent toast was the health of the Chairman, proposed by Viscount MILNER.

British Medical Journal.

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MUCOUS COLITIS.

WITH all the advance of medical science the ancient importance of the alimentary canal remains undiminished and continues to receive quite its fair share of research and speculative discussion. This field, originally the freehold of the physician, has been cut into by the surgeon and much investigated by the laboratory worker; many of its problems, however, still await complete solution. Lord Dawson of Penn has therefore done well to take the opportunity of the Annual Oration before the Medical Society of London of reviewing (p. 31) our practical knowledge on this difficult and far-reaching subject, upon which he speaks with the advantage of a ripe clinical experience that enables him to apply the new knowledge to the needs of the bedside.

The form **of colitis** considered is that commonly known as mucous colitis, due primarily to disordered function and not to inflammation, though infection may supervene. In order to avoid the implication of inflammation conveyed by the termination *-itis*, von Noorden and others twenty years ago preferred the name mucous colic. It is indeed now generally forgotten that the termination *-itis* has only secondarily acquired its present universally accepted significance. More than thirty years ago the late Dr. Thomas Buzzard, in the course of a discussion on the pathology of chronic alcoholism,[1] related the history of the termination *-itis*, which had not appeared to him applicable to conditions such as a simple degenerative neuritis; after some inquiry he found that *-itis* is a Greek feminine adjectival termination agreeing with *νόσος* (disease) understood, so that neuritis really is the short for *ἡ νευριτις νόσος*, the disease of the nerves. No doubt as most striking diseases were, or were thought to be, inflammatory, this secondary connotation became general; thus pleurisy was originally the disease of the pleura, as indeed is shown in Liddell and Scott's Lexicon (1883), but melaena (the black disease) with a different feminine termination did not lose its original significance. Therefore, from a strict etymological point of view, "colitis," meaning thereby colonic disease, might be applied to non-inflammatory disease of the colon.

In a paper read before the Royal College of Physicians as long ago as 1818 Richard Powell described cases of what is now known as mucous colitis, but the disease attracted little attention until the end of the last century; since then it has become much more frequent, or is at least more frequently recognized, so that we may agree with Lord Dawson in terming it a product of modern life. He pointed out that it is commonly accompanied by symptoms referable to other parts of the alimentary canal, and may be either the first or the final expression of an attack involving the whole of the gastro-intestinal tract; thus gastric dyspepsia due to the colon, just like appendix or gall-bladder dyspepsia, illustrates the close correlation of the various parts of this system. An interesting though brief reference is made to the part played in gastro-intestinal disorders by a deficiency of vitamins; this subject was fully dealt with in an illustrated article in our columns a year ago (1920, vol. i, June 19th, pp. 822–826) by Lieutenant-Colonel R. McCarrison, who described gastric dilatation, pancreatic insufficiency, coeliac disease, and gastro-intestinal stasis and toxaemia as probably connected in their origin or in their continuance with dietetic deficiency and lack of balance of the food. In monkeys colitis could be produced with great regularity by a deficient diet and removed by a diet perfectly proportioned and containing an adequate supply of vitamins, while microscopically the intestinal walls of such monkeys fed on devitaminized food showed muscular atrophy and degeneration of the nerve cells in Auerbach's plexus. These results would therefore seem to warrant a much freer use of fruit and vegetables in mucous colitis than in practice has been thought advisable, and also the propriety of giving the eggs raw.

In the discussion of the difficult subject of intestinal stasis and toxaemia, so familiar from Sir Arbuthnot Lane's work, Lord Dawson insisted on the important detoxicating function of the liver, and made reference to the observations of Widal and his coworkers on the "haemoclasic crisis" or the changes—leucopenia, fall of blood pressure, and loss of coagulation—which precede the manifestations of protein shock; normally the liver prevents protein products having this effect from entering the general circulation, and therefore no haemoclasic crisis follows digestion; but with hepatic insufficiency these changes occur, and in this connexion it may be mentioned that Widal, Abrami, and Iancovesco[2] have adopted as a test for the functional activity of the liver an examination for the haemoclasic crisis after drinking a tumbler of milk. Lord Dawson compares the condition popularly known as "chill on the liver" to anaphylactic shock, points out the resemblances between asthma and colitis, and suggests that some attacks of colitis without obvious cause may be anaphylactic in origin.

The reader of the Oration will turn with special interest to the subject of the treatment of mucous colitis, and more particularly to the judgements passed on the vexed question of operation. It is pointed out that, as the appendix is rarely the primary focus and when inflamed becomes so concomitantly with the colon, its removal seldom benefits patients with mucous colitis. Further, a wise caution is thrown out as to the significance of anatomical abnormalities revealed by *x*-ray photographs; various displacements of the intestines may exist without any symptoms because the really important factor is the muscular efficiency of the bowel, and hence ingenious operations for various ptoses may prove disappointing when the essential defect is muscular failure and not the obvious visceral displacement. The experience of complete colectomy was regarded by the orator as disappointing, though exceptional successes are admitted; a less gloomy view was taken of partial colectomy, for the operative risk is small and there is little danger that the patient's condition will thereby be made worse; but Lord Dawson is far from showing any enthusiasm, and indeed puts in a plea for colotomy as likely to be more efficient in the cases in which the distal colon shows muscular insufficiency.

FRENCH WATERING PLACES.

FRANCE is well endowed with mineral water and climatic resorts, and though we cannot go so far as M. Meillère, who, in an address delivered during the celebration of the centenary of the Académie de

[1] T. Buzzard: *Trans. Path. Soc.*, London, 1889, xl, 347.

[2] Widal, Abrami, et Iancovesco: *Presse méd.*, Paris, 1920, p. 893.

Médecine, declared them to be "jewels beyond compare, forming the most beautiful ornaments of which a country could dream,"[1] we may agree that their merits and attractions are many and various. Though Vichy, perhaps the most celebrated, boasts itself to be at the geographical centre of France, they are for the most part to be found among the hills and mountains of the southern and eastern border lands, in the Pyrenees, Savoy, and the Vosges. The majority, therefore, are in situations where the scenery is such as modern taste finds agreeable, and where there exist bracing climatic resorts suitable for an after-cure.

Many of them were used when Rome held sway in Gaul, and the sick, wounded, and convalescent sent to Aix-les-Bains and Vichy during the last few years were preceded by Roman legionaries who went to the same places to recover from the wounds or recuperate from the fatigues of warlike operations in districts not far removed from the areas fought over during the recent war. The Romans chose so well that nearly all the resorts now frequented were known to them. Not that they have been continuously in use; like much else of the apparatus of civilization, they fell out of use. Charlemagne revived Aix-la-Chapelle, which was within his Gaulish Empire. He also, M. Meillère slyly observes, brought the grape from the Abbey of St. Joseph, near Orleans, to the valley of the Rhine; but if the bane survived the antidote did not, and courts and schools forgot all about spas. Still, a hot or heavily mineralized spring is a natural phenomenon sufficiently striking to continue to attract local attention, and the return of somewhat more settled conditions and improved means of communication made it worth while for Henry IV in 1603 to appoint directors of the "waters, baths, and mineral springs of the kingdom," with the senior physician to the King as director-general. Though under Louis XIV it began to become fashionable to take the waters, arrangements for visitors remained primitive; when in 1675 Madame de Maintenon took the Duc de Maine, the 5-year-old son of the King, to the sulphur waters of Barèges, she had to be content, in the best house in the place, the only one with a tiled roof, with one room for herself and charge, furnished with a bed, a cot, a table, a wardrobe, and one chair.

At first there was little or no selection of cases sent to any particular mineral spring, but attempts at analysis were made before the end of the seventeenth century, and early in the reign of Louis XV his senior physician, Sénac, succeeded in obtaining the appointment at each place of a physician to supervise "the correct administration of the waters and the comfort of patients." When Sénac died, in 1772, the King appointed a commission to control the mineral springs of the kingdom and to collect information about them; it was instructed also to examine secret remedies. During the Revolution considerable attention was given to the matter; steps were taken to improve the equipment of the springs and to secure more effective inspection, arrangements were made to enable indigent persons to take advantage of them, and hospitals were established at twelve springs for the benefit of sick or wounded officers and soldiers.

The supervision of medicinal springs and climatic health resorts was handed over to the Académie de Médecine on its foundation in 1820. The Académie at once appointed a permanent mineral water committee and established a chemical laboratory, which has been at work ever since under a succession of distinguished directors. The Académie des Sciences had directed analyses to be made as early as 1670, but the chemical methods available were then very imperfect, and, although a great amount of interest was shown in the matter, it was only very gradually that chemists succeeded in improving them. Since 1892 a bacteriological as well as a chemical examination has been made, and the reports presented to the Académie de Médecine relate also to the constancy of composition, temperature, and yield, and to the method of collection. The Académie has also arranged that its authorization shall be valid for thirty years only, and that at the end of that period a fresh examination shall be made. Experience shows that the composition of mineral waters and the temperature of thermal waters are remarkably constant and that the yield varies very little. It is of course not possible to say that the salts in the water of the springs used remain the same, but it is at least significant that the most famous Roman thermal springs in Western Europe, from Bath to Aix-les-Bains, are famous still. No entirely satisfactory explanation of the constancy actually observed during the last century or so has been advanced. Eminent geologists from Elie de Beaumont to Suess have been disposed to regard the hot wells as, so to say, minor volcanic phenomena, but Amand Gautier, who reviewed the subject fully in 1906, while leaning to this view, had to admit that the mystery remains in spite of all that in recent times has been done about the gases of springs.

In giving permission for the exploitation of French mineral waters or the importation of foreign, the Académie is guided by the reports received from its permanent mineral waters committee, and has recently given much more attention to the general sanitation of the town in the case both of baths and climatic resorts. Special measures have been taken at the leading health resorts, and the bath arrangements at such places as Vichy, Aix-les-Bains, Brides-Salins, and Contrexéville are of the most complete modern type; at most of the smaller places, including the Pyrenean resorts, all necessities and most luxuries are provided. In this country there has been no attempt to institute central control of mineral water stations; it is not needed, for health resorts of all kinds have had their full share in the general improvement in urban sanitation, and the provision of bathing facilities has properly been left to local initiative, with the result that in these respects the larger British health resorts included within the Federation of British Spas are in no way inferior to the corresponding resorts in France or Germany.

In France the Académie is bringing pressure to bear on places ambitious to obtain its recognition; it has recently seen fit to refuse it to a good many applicants, pointing out that a place that seeks to attract invalids in search of health should be careful to see to its general sanitation, and be able to show a low death rate from communicable diseases.

[1] *Bull. de l'Acad. de Méd.*, lxxxiv. p. 502.

SECTIONS IN 1893 AND 1921.

THE annual meeting of the British Medical Association was last held in Newcastle-on-Tyne in 1893. It had met there once before, in 1870, when Dr. Edward Charlton was President. In 1893 the late Sir George Philipson, Professor of Medicine in the University of Durham, and Senior Physician to the Newcastle Royal Infirmary, was President, and the Address in Medicine was delivered by Dr. David Drummond, who will preside over the meeting this year. The Address in Surgery was delivered by Mr. G. H. Hume, Surgeon to the Newcastle Royal Infirmary, and that in Obstetrics and Gynaecology by Dr. C. J. Cullingworth, obstetric physician to St. Thomas's Hospital. Mr. (afterwards Sir) Henry Butlin, Surgeon to

St. Bartholomew's Hospital, was treasurer of the Association. Dr. Withers Moore of Brighton, who had been Chairman of the Council for the preceding three years, was at this meeting succeeded by Dr. Ward Cousins, who afterwards, when the Association met in Portsmouth (1899) became its President. This year there are seventeen sections; in 1893 there were eleven, but then all eleven met on three mornings, whereas this year six sections meet on two mornings only and six on one morning only. So that the number of sessions this year will be thirty-three, exactly the same as in 1893. It may be of some interest to look back to the subjects selected for discussion in the sections in 1893. In Medicine they were glycosuria in middle life, introduced by Sir Dyce Duckworth; atrophic paralysis, introduced by Dr. (now Sir) David Ferrier; and concussion of the spine, raised by Dr. Byrom Bramwell, of Edinburgh. This year the subjects are visceral syphilis, introduced by Sir Clifford Allbutt; asthma and allied disorders, by Sir Humphry Rolleston; and lethargic encephalitis, by Dr. Edwin Bramwell. In Surgery the subjects in 1893 were: the radical cure of hernia, introduced by Dr. Halstead, then surgeon to the Johns Hopkins Hospital, Baltimore; the surgical treatment of cerebral tumours, introduced by Professor (afterwards Sir) Victor Horsley; and the treatment of intestinal obstruction, a subject brought forward by Mr. Frederick Page, Mr. (afterwards Sir) Jonathan Hutchinson, Mr. Jordan Lloyd, Mr. (now Sir) A. W. Mayo Robson, and Mr. (now Sir) Gilbert Barling. This year the subjects are: acute pleural empyema, introduced by Mr. Henry Wade, of Edinburgh; compound fracture of the thigh and leg; and, curiously enough, the diagnosis and treatment of injuries of the intestines, a subject not very far removed from that discussed on the third day in 1893. In that year there were in the Section of Obstetric Medicine and Gynaecology discussions on that still much discussed subject, puerperal septicaemia, and on the conservative treatment of the diseases of the uterine appendages. This year the subjects are Caesarean section and the neurasthenic element in midwifery and gynaecology the latter introduced by an obstetrician, Professor Donald of Manchester, and a neurologist, Dr. Farquhar Buzzard of London. The Section of Diseases of Children, which met in 1893 under the chairmanship of Dr. (now Sir) Thomas Barlow, discussed abdominal tuberculosis in childhood, heart disease in childhood, and the treatment of enlarged cervical glands, a subject introduced by Dr. (now Sir) Clifford Allbutt and Mr. Pridgin Teale. This year tuberculosis again appears in the programme of the Section of Orthopaedics and Diseases of Children, for there is to be a discussion on the general principles of its treatment; other subjects for debate are the diagnosis and treatment of anterior poliomyelitis and blood diseases in childhood. In 1893 the Section of Ophthalmology held a discussion, opened by the late Dr. Buzzard, on optic atrophy as a symptom of chronic disease of the central nervous system; this year there will be discussions on the causes and prevention of blindness, to be introduced by Mr. Bishop Harman, and the treatment of corneal ulcers, to be introduced by Mr. J. V. Paterson. In the Section of Otology the subjects discussed in 1893 were the surgical treatment of mastoid disease and its complications, and the pathogenic organisms of the naso-pharynx and ear, the latter discussion being opened by Dr. Macintyre of Glasgow. This year, in the Section of Oto-Rhino-Laryngology, Sir Charles Ballance will open a debate on the problems in connexion with the early diagnosis and treatment of meningitis occurring in aural cases, a subject nearly related to that discussed in 1893; there will be a discussion also on the various problems presented by haemorrhage occurring in connexion with operations on the tonsils. In 1893, in the Section of Dermatology, there were discussions on ringworm, opened by Dr. Colcott Fox; on psoriasis, introduced by Dr. Radcliffe Crocker; and on lupus, introduced by Mr. Jonathan Hutchinson. This year Dr. H. W. Barber will open a discussion on cutaneous sensitization and focal sepsis in the etiology of certain skin affections, Dr. G. H. Lancashire will raise the question of the association of skin tuberculosis with visceral and other tuberculous manifestations, and Dr. Henry MacCormac will open a debate on dermatological cases attending the Pensions Boards.

THE NEWCASTLE MEETING.

THE general arrangements for the meeting are now complete, and it is hoped that the promised restoration of normal railway services will encourage many members who may have been hesitating to make up their minds to attend. The hosts in Newcastle assure them of a hearty welcome. It has been possible to make use for purposes of the meeting of a series of buildings conveniently close together. The Annual Representative Meeting and the Annual General Meeting will be held in the King's Hall of Armstrong College, where also the President, Dr. Drummond, will give his Address. Most of the Sections, too, will meet in the College. The Grand Assembly Rooms, which are next door, will be converted into a medical club during the meeting, and there members will find sitting, reading, and conversation rooms, and a dining room where breakfast, lunch, tea, and dinner will be served. Within five minutes' walk is St. George's Hall, where the Annual Exhibition of Surgical Instruments, Drugs, Foods, etc., will be held, and on the opposite side of the road is the College of Medicine, where the Sections of Pathology and Bacteriology and of Physiology, Pharmacology, Therapeutics, and Dietetics will meet, and the Pathological Museum will be displayed. It was mentioned last week that Professor Matthew J. Stewart, of Leeds, had taken the place as President of the Section of Pathology and Bacteriology of Dr. Stuart McDonald, of Newcastle, who is unable to act owing to a recent bereavement. As will be seen from the programme published in the SUPPLEMENT this week, it is proposed in this Section to hold discussions on the first day on haemochromatosis and on the streptococci; on the second day papers on the relation of carcinoma to infection and on malignant melanoma will be read; on the third day the Section will join with that of Medicine in discussions on encephalitis lethargica and on renal efficiency tests. Arrangements have been made for the exhibition of specimens illustrating the subjects for discussion. Offers of specimens and of contributions to the Pathological Museum may be addressed to Dr. A. F. Bernard Shaw, Pathological Department, College of Medicine, Newcastle-upon-Tyne, who is honorary secretary both of the Section and of the Museum. The Section of Ambulance and Red Cross when it meets on Wednesday, July 20th, will be addressed by the President, Sir James Cantlie, on the claim of first aid to be regarded as a special branch in practical surgery. He will afterwards describe the work of the *x*-ray motor ambulance wagon service in London and the surrounding counties, and suggest the extension of the system throughout Great Britain. He will also give a demonstration of Thomson's machine for armless men. Dr. Highet will show several devices of his invention, and there will be a discussion on stretcher slings. Within easy reach of Newcastle, especially to the north, there is much picturesque country and many places of historical interest. An excursion has been arranged on Saturday, July 23rd, to the Roman Wall and another to Alnwick, where is the castle of the Duke of Northumberland, one of the most successful examples of restoration in the country.

X-RAY TREATMENT OF CANCER.

IT is, we think, to be regretted that the authorities of the West London Hospital should have seen fit to give a press demonstration of the *x*-ray apparatus they recently obtained from Germany for the treatment of malignant

disease, and so made themselves responsible for the articles on a "New Treatment for Cancer" which have been appearing in the lay press. It is altogether too soon to make such statements as that "it is now clear that radiology can do far more for the cure of cancer than surgery has hitherto achieved," or that "a figure of cures as high as 80 per cent. of the cases thus treated is looked for by those who are by no means extravagantly hopeful." Yet both of these statements occur in a type-written communication which we have received from the hospital in question. As the apparatus has been installed for a time too short to allow any experience with it to be of value, these statements and such a statement as that a complete revolution in the treatment of cancer is taking place, must rest entirely on reports of results alleged to have been obtained in Germany. Essentially the success of the new departure will depend on two things—the production of *x* rays of very high penetrative power, and on the establishment of the claim that an accurately measured dose of these rays will destroy cancer cells. Radiologists have for some time past been asking for more powerful apparatus and more penetrating rays. Though they have been using the latter empirically, results have improved. The latest method must stand or fall on the facilities it affords for accurate measurement of the dose. Well-known radiologists both in France and in America would agree that the methods for the application of *x* rays have been improved, but to say this is very far from asserting that surgery is to be displaced, and that all cases of malignant disease are to be treated by *x* rays. The most recent statistics we have seen are those supplied by Wintz of Erlangen to Collin, and quoted by him at the meeting of the German Röntgen Society last April. Wintz claims that the results have grown better year by year as the technique has improved. Of the patients suffering from cancer of the uterus treated by the intensive *x*-ray method, 50 per cent. were, Wintz states, clinically free from relapse and fit for work after five years. Among those who had been under observation for four and three years respectively, the percentages of apparent recovery were 60 and 75. Of the cases of inoperable cancer of the uterus submitted to treatment, 17 per cent. were, after five years, clinically free from relapse and fit for work. With regard to the results in cancer of the breast he was more guarded observing that the slowness of the course of the disease in many cases rendered it difficult to determine the value of any treatment. He, however, gave some particulars of 35 cases of cancer of the breast, stating that of those which had been under observation for four years 75 per cent. remained free from the disease, and of those observed for three years 85 per cent. Collin evidently regards these statistics with some suspicion, pointing out that the effects produced by the new apparatus devised by physicists have not yet been adequately controlled by medical experts. He made the significant suggestion that such control could best be exercised away from factories and business centres, and hinted that it would be well to await the findings of a commission which had been appointed to inquire into the debit side as revealed by the failures and disasters traceable to *x*-ray treatment. We agree that the method ought to have a trial in this country; it is very necessary that the trial should be carried out in a scientific spirit. The Manchester Royal Infirmary, acting in conjunction with the University, has taken steps in the right direction by appointing a research scholar and sending him to Erlangen and other German centres as a preliminary to his beginning research work in Manchester under the direction of Drs. Barclay and Burrows and Professor Bragg. Meantime the profession will be well advised to reserve judgement and to use its influence to deter the public from jumping to the conclusion that the problem of the treatment of malignant disease has been solved.

THE LISTER INSTITUTE.

THE annual report of the Lister Institute gives a general view of its manifold activities. A great deal of attention has been given to the investigation of the physiology and pathology of the accessory food factors; thus, in the Department of Experimental Pathology, of which the Director of the Institute, Professor C. J. Martin, F.R.S., is the chief, Miss Hume has made experiments on the antiscorbutic value of sweetened condensed milk. A well known brand examined, which was found to retain its antiscorbutic properties unimpaired, is made by boiling *in vacuo;* in this way the destructive effect of oxygen at a high temperature upon this sensitive vitamin is avoided. Other experiments made in this department were those of Professor Korenchevsky and Miss Tozer on rickets. The former confirmed McCollum's observation that rickets is produced most readily in rats by deprivation of the fat-soluble vitamin A and reduction of calcium in the diet. Korenchevsky has also examined the histology of the glands of internal secretion in rickety monkeys, as well as the effects of various deficiencies in the diet upon the growth of the animals and the structure and calcium content of their bones. In the Department of Biochemistry, of which Professor Harden, F.R.S., is the head, he and Dr. Zilva have continued their investigation on the influence of a diet free from the fat-soluble factor, and Zilva and Miura have evolved a method by which quantitative comparison can be made of the amount of vitamin in various materials, or in the same material after various modes of treatment. As the result of the inquiries of Drummond and Zilva on the destructive influence of oxidation on the fat-soluble vitamin, to which we have at various times made reference, a scheme was prepared for an investigation of the methods employed in the preparation and purification of animal oil. With the help of a grant from the Medical Research Council various oil mills and large factories in England were visited, and a visit is being paid this summer to northern Norway to study the production of cod-liver oil. By continuing his work on the extraction of the fat-soluble vitamin from vegetables Zilva has devised a method of obtaining from carrots an extract potent in very small quantities. He has also investigated the effects of ozone on the antiscorbutic and antineuritic factor, and has ascertained that while the former is very sensitive to ozone, the latter is much more resistant. He has ascertained that the antiscorbutic factor is unstable in the presence of atmospheric oxygen, and experiments are being made to ascertain the effect of heat under aerobic and anaerobic conditions, the results already obtained pointing to the conclusion that the effects attributed to heat must be reconsidered with due regard to the degree of aeration during the process. From certain experiments he has made Professor Harden has established the important conclusion that the water-soluble antiscorbutic factor can be synthetized by yeast organisms. The mission sent to Vienna by the Committee on Accessory Food Factors appointed jointly by the Lister Institute and the Medical Research Council continued its work during the year, and we have from time to time been able to publish some of its results. The observations which are being made upon a large number of children will, it is anticipated, throw much light on the problem of nutrition in infancy and early childhood. In the Department of Bacteriology Dr. Ledingham has resumed his investigation on purpura in collaboration with Dr. Woodcock. It has been demonstrated that in mammals the inoculation of the corresponding antiblood-plate serum has the property of producing an outburst of purpura simultaneously with a disappearance, partial or complete, of the platelets from the circulating blood. In view of certain physiological and morphological peculiarities of the blood of birds—for example, slowness of clotting and apparent absence of elements morphologically similar to

blood plates in the mammal—it was decided to inquire whether certain elements of avian blood, known for many years as thrombocytes or spindle cells, could be similarly acted upon by the corresponding antiserum with consequent production of purpura. Though the difficulty of isolating these thrombocytes from the other blood elements in sufficient concentration for immunization purposes has been much greater than in the case of mammalian blood plates, it has been possible to secure an antithrombocyte serum sufficiently potent to produce, when inoculated into the pigeon, a typical purpuric eruption with disappearance of the thrombocytes from the circulating blood. Dr. Bedson, who formerly collaborated with Dr. Ledingham in studying purpura in mammals, is engaged in working out some of the many unsolved problems in connexion with the experimental production and possible cure of the purpuric state. In the department for the preparation of antitoxic serums experiments on the refinement and concentration of antitoxin have been continued. All diphtheria and tetanus antitoxin issued is now refined and if necessary concentrated, and it is hoped still further to improve the methods used. The plan for producing reliable standard antitoxins in liquid form simply and easily, introduced some years ago by Dr. MacConkey, is being followed up, and would appear to be applicable to toxins also. The national collection of type cultures now contains over 1,000 organisms, and a selection of 500 authenticated cultures of fungi which are of importance in plant pathology and technical mycology has been made by a special committee of the Mycological Society, and will be maintained and distributed by the curator of the national collection.

THE SUSSEX HOSPITAL SCHEME IN LONDON.

It is announced that the London Hospital, St. Thomas's Hospital, and the Royal Free Hospital have resolved to make trial of the voluntary insurance or provident scheme for hospital benefits and additional medical services known as the Sussex scheme. An organizing committee has been established at 3, Fenchurch Avenue, and the private help it has received towards the initial expenses will make it possible to bring the organization into operation at an early date without casting any charge upon the charitable funds of the assenting hospitals. The scheme was described in our columns by its initiator, Dr. Gordon Dill, on January 22nd, 1921, p. 129, and has been discussed on several occasions since, but we reproduce here, for the convenience of readers, the account of it contained in the report of Lord Cave's committee. "The scheme is confined to persons whose income does not exceed £260 per annum for a single member, £400 per annum for a man and wife without children or a widow with one child, and £500 per annum for a married couple with a family. The subscription for an unmarried person or a widow or widower without children is £1 per annum; married people without children or a widow or widower with one child pay a joint subscription of £1 10s. per annum, and married people with a child or children under 16 or a widow or widower with children under 16 pay a family subscription of £2 per annum. In the case of persons employed at works or factories, the amount is collected, as far as possible, by weekly deductions from wages. Members are entitled to free consultation and treatment at any of the co-operating hospitals, or, in the case of members unable to leave their beds, at their homes, but subject in the case of country members to payment of half the usual mileage rate from Brighton. The treatment includes ordinary dental treatment, laboratory and *x* ray examinations, massage and electrical treatment when required. Urgent cases are admitted to hospital at once, and others in their turn, but a member has no precedence over more urgent cases. Of the proceeds of the scheme one-fortieth is reserved for the cost of laboratory work, one-fortieth for *x*-ray work, one-fortieth for secretarial work, thirty-five-fortieths are divided among the co-operating hospitals on a basis determined according to an estimate of work done, and the remaining two-fortieths are retained until the end of the year, and are then distributed among those hospitals which have had the heaviest calls made upon them. Of the sums paid to the hospitals 25 per cent. is placed in a fund which is at the disposal of their medical staff."

THE GOLD MEDAL OF THE ROYAL SOCIETY OF MEDICINE.

Some time ago a Fellow of the Royal Society of Medicine furnished funds to enable a gold medal to be awarded triennially on St. Luke's Day for original discovery in medicine and other allied sciences, or for the practical application of the results of previous investigations of other scientists, or for the most valuable contribution in any other way towards the progress of the art and science of medicine, preventive medicine, or surgery. The donor expressed the desire that the first medal, at any rate, should be awarded for work which had been proved to be of service in the war, and a committee of selection appointed by the Society felt that Sir Almroth Wright's bacteriological researches amply fulfilled this condition. The award was accordingly made to him, and on Armistice Day, November 11th, 1920, he gave an address on medical research, a report of which was published in our columns at the time. The medal, however, was not

ready then, so that its presentation had to be deferred; it was formally presented at the annual meeting of the Society on July 6th. We reproduce photographs of the medal, which has been designed by Mr. E. Carter Preston. The obverse represents Hygeia, daughter of Aesculapius, bestowing a wreath upon Research, represented as a kneeling figure holding a lamp. The inscription round the rim is "Auspiciis Societatis Regiae Medicinae"; in exergue the legend which forms the motto of the Society, "Non est vivere sed valere vita"; in the field, "Institutae MDCCCV." The reverse represents Aesculapius being taught the art of healing by Chiron, the wise Centaur, beneath whom is the serpent of Aesculapius. In the field to the left is the bow of Apollo (father of Aesculapius) symbolizing the Sun, the deliverer from plagues. The fountain on the right suggests the Fountain of Truth, and the inscription runs, "Finis Coronat Opus."

The Voluntary Hospitals Committee presided over by Lord Cave recommended the establishment of a Hospitals Commission for Great Britain, and advised that one of the twelve members should be nominated by the British Medical Association. The Council of the Association has nominated its chairman, Dr. R. A. Bolam, of Newcastle-upon-Tyne. The first and principal duty of the commission will be the administration of the temporary grant of a million, reduced by the Government to half a million, which the committee recommended Parliament should make. It will be empowered to recommend grants for the extension and improvement of hospital accommodation, and will be available for other functions mentioned in the report.

Medical Notes in Parliament.

[FROM OUR PARLIAMENTARY CORRESPONDENT.]

The Maternity Convention.

THE Minister of Labour, in the House of Commons on July 1st, moved a resolution formally asking approval of the policy of the Government respecting the several conventions and recommendations of the International Labour Conference at Washington in November, 1919. The submission was made on the request of Mr. Barnes (who represented this country at the Conference), to enable a debate to take place on the two proposals carried at the Conference which were not adopted by the British Government. These were the convention for limiting labour to eight hours a day and the Maternity Convention. The whole matter was raised in a debate on May 28th, when the present further opportunity for going into it was promised. The Attorney-General then gave an opinion that unless legislation was required on the decisions of the Cabinet, the Government was not bound to submit the conventions for the consideration of Parliament; but, without prejudice to that legal view, Dr. Macnamara made his motion in courtesy to the House, the constitutional point being thus left open. The case of the Government with regard to the eight hours proposal was that it could not be adopted without upsetting the arrangement made with the railway unions. The proposals in the Maternity Convention that the State should provide for the six weeks preceding and the six weeks following confinement related only to employed women. Dr. Macnamara reminded the House that in this country a system had been developed for dealing with this question on entirely different lines, providing not only for employed women, but for the wives of employed contributors—a very much larger number. The British system was directed by the same spirit as the Washington Convention, but the latter, if adopted by us, would cut right across the arrangements we had built up. These arrangements, under the National Insurance Act and in connexion with maternity and child welfare centres, were (Dr. Macnamara said) in advance of those of any other country in the world. Was existing machinery, built up with a remarkable measure of success as the result of years of effort, to be scrapped and a start made again on new lines? The Government decided that such a change would be unjustifiable.

Mr. Barnes, in the course of a lengthy speech, said that the auditor had stated that the cost of ratifying that particular Convention would be about £1,700,000 a year. It was argued by some persons that the effect would be to attract into industry women who were not now engaged in it, and that therefore the cost might be greater. It was argued by others that employers would not engage married women if they were to be subject to the Convention. Mr. Barnes acknowledged that there was no obligation on the part of the Government to adopt this Convention, as he, the acting British representative at Washington, had not voted for it, but he added that he would have no hesitation in supporting it if it could be "fitted into our conditions."

Mr. Clynes urged that the Maternity Convention should be adopted because the primary consideration should be for employed women, and the recommendations were important for them. This provision, so many weeks before and after confinement, was not solely a question of money. It was a question also of rest and fresh air and of treatment of a kind that would tend to build up a better nation. The country could not afford to let women and children suffer by reason of a saving which might be two millions a year by not ratifying this Convention.

Viscountess Astor also supported the Convention. Under the present system in our country if the husband and wife were both insured they got £4 at the time of the confinement, but the woman drew nothing after confinement, unless after four weeks she was ill, and then she got 12s. a week. The whole point of the Convention was to protect women who, through the illness of a husband, or through the husband not getting a sufficient wage to keep the family, were forced into industry, and had to keep at work until the very last hour before confinement and had to go back after a week. The Minister should call a conference of women experts to see if there were any way in which this crying need could be covered.

Lord Robert Cecil agreed with Mr. Barnes that the Government was quite free as to the attitude it should take as to this Convention, as other nations had been warned by Mr. Barnes that this country was not prepared to accept it. Nevertheless, he should be glad if the opportunity arose for the nation to go further in that direction.

Mr. Myers said that if the parts of the country where women were most numerously employed were traced and the infantile death-rate examined the necessity for definite action would be obvious. In this country the employment of women for a month after childbirth was prohibited, but this applied only to industrial occupations. In Italy and Denmark similar conditions prevailed. In Belgium the conditions applied to all occupations in which women were engaged. In South Africa the employment of women was prohibited for four weeks before childbirth and eight weeks after. In some countries women were given the opportunity of having an optional resting period. At any time previous to confinement they could remain at home, and they had the right, established by law, that when they presented a medical certificate at any time after confinement they could resume their occupation, and the employer had then some measure of responsibility for giving them work again. As compared with a number of other countries, our conditions were the minimum.

Mr. Chamberlain, in replying for the Government, said that our legislation had gone further than that of any other country, with the possible exception of one of our dominions and part of another.

Dr. Macnamara's motion was carried by 164 votes to 53. As the main topic of debate was the Eight Hours Convention, it is impossible to judge the significance of the figures as touching the maternity question.

National Insurance Bill.

Committee and Third Reading.

The National Insurance Bill to provide for higher administrative expenses was taken in Grand Committee of the House of Commons on June 30th, Sir William Pearce presiding.

On Clause 1 (Amendment of Financial Provisions) Lieut.-Colonel Sir Alfred Warren traced the history of the proposal to increase the administration allowance for approved societies from 4s. 5d. to 4s. 10d. a member a year. The societies had all along contended that 5s. should be the minimum.

Sir Alfred Mond said that the figure of 4s. 10d. had been reached as the result of many months of careful investigation by the Departmental Committee, on which all the various interests were represented. In 1919 there was an allowance of only 3s. 5d. In 1914 the actual expenditure was 3s. 1d.

Colonel P. Williams said that he had been told, with what truth he did not know, that National Insurance could be run by one of the large industrial societies at a considerably reduced cost.

Sir Kingsley Wood said that the valuations of the societies throughout the kingdom, in almost every case, showed a large surplus. He believed that it was estimated that only 12 per cent. of the contributions went in management expenses. The cash benefits alone paid to insured persons during the operation of the Act had now reached a sum of almost 70 millions. The expenses of industrial companies approximated to 40 per cent. of the contributions. The clause was afterwards agreed to.

Clause 2 (Contributions by Societies towards Administration Expenses of Insurance Committees) was passed without discussion.

An addition was made to Clause 3, under which the Insurance Committees for England and Wales are to be reduced. Hitherto they were required to consist of between forty and eighty members; in future they are to consist of from twenty to forty. Colonel Sir W. Allen moved a provision that two members should be appointed by the committee recognized as the local medical committee for the county or county borough, and this was accepted by Sir A. Mond and agreed to.

The Committee also passed a new clause, now being inserted in all bills dealing with subjects on which Irish Parliaments had power to legislate. This is to enable them to amend a measure in its application to Ireland.

The third reading was taken on July 5th. Sir Alfred Mond, dealing with a criticism by Sir Godfrey Collins as to expense of administration, said that the cost of managing approved societies was 12½ per cent. of premium income as compared with 40 per cent. in commercial undertakings.

Ex-Service Men: Fee for Medical Examination.—Sir H. Nield asked, on June 30th, whether ex-service men who had passed the qualifying educational standard for the Civil Service were required to pay a fee of 15s. before they could be medically examined; whether, having regard to the fact that most of these men had been employed temporarily in Government departments at a salary of £3 15s. per week, out of which they had had to pay fees for entering the examination, as well as for attending classes, this medical examination fee could be debited to the National Insurance Commissioners, seeing that many of these men had never received any pecuniary benefit under the Act. Sir H. Nield suggested further as an alternative that only those who passed the medical examination should be asked to pay, and they should make this payment at a later date. Mr. Young replied that the fee for medical examination demanded in the cases of candidates for all but the highest appointments in the Civil Service had, after negotiations with the British Medical Association, been fixed at 15s., and he was satisfied that this sum was a reasonable charge for the detailed report required. He was not prepared to impose a charge upon the Exchequer in respect of this fee, for which insurance funds could in no case be made liable.

Irish Hospitals.—Sir Maurice Dockrell, on June 29th, asked the Minister of Health why Ireland was excluded from the reference to the committee appointed by the ex-Minister of Health, and was in consequence excluded from the grant of £500,000 about to be made to the voluntary hospitals of the United Kingdom. Sir A. Mond gladly acknowledged the value of the work of the voluntary hospitals of Ireland. That country was left out of the purview of Lord Cave's committee, as it was thought that the Irish Parliament should be free to provide as they might think fit for the needs of Irish hospitals. On another question by Sir Maurice Dockrell, on June 30th, Sir Hamar Greenwood said that Parliament already made an annual grant of over £16,000 to Irish hospitals. Under present conditions the Government did not see its way to ask Parliament to increase that amount. The reason that Lord Cave's committee did not consider the condition of Irish hospitals was that under the Government of Ireland Act hospitals in Ireland came under the provisions of the two Parliaments.

Subsidy to Hospitals.—Mr. Leonard Lyle asked, on June 29th, what steps, apart from the grant of money towards voluntary hospitals, the Government proposed to take to give effect to the recommendations of Lord Cave's committee. Sir A. Mond replied that he was then taking steps to appoint a hospital commission, which would be responsible for the establishment of local hospital voluntary committees, for the distribution of the State grant, and for assisting in raising fresh revenue, and for combining and co-ordinating the activities of the hospitals generally on the lines recommended by Lord Cave's committee. The other recommendations of that committee, some of which would require legislation, were still under consideration. Mr. Lyle asked if, in view of the fact that the Finance Bill was passing through the House, the Government would consider the recommendation that the contribution of employers should be exempt for the purposes of income tax. Sir A. Mond said that point would certainly be considered.

Hospitals in Dublin.—Mr. Devlin asked, on July 4th, whether the attention of the Minister of Health had been drawn to the annual report of the Board of Superintendents of the Dublin Hospitals, which stated that all the hospitals were conducted in an economical and highly efficient manner, but that all were in a more or less critical condition financially, the indebtedness of each hospital being as follows: Westmoreland, £7,946; Meath Hospital and County Dublin Infirmary, £6,688; Cork Street Fever Hospital, £5,882; House of Industries Hospital, £5,843; Rotunda, £5,014; Coombe, £4,355; Royal Victoria Eye and Ear, £7,500; and Royal Hospital for Incurables, £7,279; and whether the Minister of Health would take immediate action to have grants made to these and other hospitals out of the £500,000 which had been allocated for the relief of voluntary hospitals in the United Kingdom, or by an equivalent grant for relief. Sir Alfred Mond said that the Irish Chief Secretary would answer the question; but as he was not present it was postponed.

Indian Medical Service.—Replying to Brigadier-General Colvin, on June 30th, Mr. Montagu regretted that owing to the conditions created by the war it had not yet been possible to grant leave to the Indian Medical Service to the extent desirable. Every effort was being made to bring the service up to full strength and so to make it possible to grant leave more freely. The terms of service had been immensely improved with the object of attracting a larger number of candidates of the best type, but the failing in the supply from the medical schools made this a slow process. In the meantime all the Government of India could do was to restrict the amount of leave that might be taken by an officer at one time, so that as many officers as possible might come home.

The Blind in India.—Mr. Montagu, in reply to Mr. Grundy, on June 28th, said that at the Census of 1911 there were 176,214 blind males and 173,133 blind females in British India. There was no special legislation applicable solely to blind persons, nor had the need for such legislation become apparent. Dispensaries, stationary and travelling, were available throughout British India, where treatment was given gratuitously to all poor persons; operations for cataract and other eye conditions formed one of the largest and most widely appreciated branches of the work. In the United Provinces, for example, 12,326 in-patients and 591,229 out-patients were treated during 1919 for eye diseases.

Mental Patients.—Sir A. Shirley Benn asked whether the next of kin of private patients in mental institutions, including the next of kin of ex-service men, were informed by the lunacy authorities that they possessed the privilege conferred upon them by Section 71 of the Lunacy Act, 1890, of directing the discharge of the patient, provided he could not be proved to be dangerous and unfit to be at large. Sir A. Mond assumed the reference to be to Section 72. As regards private patients generally, this provided for the discharge of the patient by the person on whose petition the reception order was made. As regards ex-service men, he recalled the answer he gave on June 16th to the effect that when a patient was sufficiently recovered to raise the question of his discharge, he was informed of the legal position.

Public Health Officers' Bill.—This measure, in charge of Lord Gainford, passed through committee stage in the Lords on July 5th. The bill was introduced in the Commons by Sir Philip Magnus.

The Occupational Census.—In reply to Mr. Rose, on June 29th, the Minister of Health said that as no occupational figures for the whole country, however approximate, could in any event be furnished until every individual return had been examined and classified, it did not appear that advantage was to be gained by any departure from the present programme. It was intended to prepare and publish occupational and other census statistics by counties. The earliest issue might be expected in a few months, and the whole would, it was hoped, be completed within two years.

Statistics of Pension Applications.—Major Tryon, answering Sir Walter de Frece, on July 4th, said that during the last six months 59,030 first applications for pensions were made by officers and men, and of these 40,700 were accepted and 18,300 were rejected. During the same period 512,500 pensioners were re-examined by medical boards, with the result that in 264,000 cases the pensions were continued at the same rate, in 45,500 they were increased, in 149,000 reductions were made, and in 54,500 the pensions were not renewed.

Dentists Bill.—The Lords' amendments to the Dentists Bill were considered in the House of Commons on July 1st, and, subject to one drafting alteration, were all agreed to.

England and Wales.

Professor Briggs of Liverpool.

JULY 2ND, Degree Day in the University of Liverpool, was happily chosen by the medical students as the occasion of their presentation to Professor Henry Briggs, the retiring Professor of Obstetrics, of a suitably inscribed silver cigar box as a token of their deep appreciation of his work. He has endeared himself to many generations of students by his strength of character and the excellence of his teaching and work. Lectures were never dull; brief notes, the fruits of many years' constant revision and improvement, were written out for the student to copy and thus aid memory; recent and preserved specimens were freely used and a student called out to demonstrate them to the class, to criticize the history, and, still more embarrassing, the diagnosis and treatment adopted.

The presentation was made in the lecture theatre by the Dean of the Medical Faculty, Mr. R. E. Kelly, C.B., F.R.C.S., in a brief speech wherein he recalled that in his own student days Professor Briggs had taught with little else than the blackboard and chalk—a few bottled specimens being his remaining equipment. Since that time the department has grown beyond recognition. About 200 specimens in a section of the pathology department comprised the equipment in 1898, the practical class was held in the medical school workshop, using a manikin in the carving of which the Professor had had an active part; lectures were given in a theatre used by several other professors and lecturers. There is now, twenty-three years later, a department of world-wide fame and reputed to be the finest of its kind. A lecture theatre, a laboratory for the reception of specimens and their investigation, either by routine work or by the constant succession of research workers; when desirable the specimens are prepared for the museum, which now contains approximately a thousand mounted specimens, some hundreds of water-colour drawings, photographs and enlargements, series of normal and deformed pelves, plaster casts and wax models, obstetrical and gynaecological instruments, ancient and modern, and for the teaching of practical obstetrics a dozen oak and teak manikins carved to the measurements of the pelves. Well might the Dean recall the words: "Si monumentum requiris, circumspice."

Professor Briggs thanked the students for their generous appreciation and the handsome reminder of many happy times spent with them. He pointed out the necessity for cordial co-operation and unselfishness in developing the department, and acknowledged the very great assistance he had received from the university, which had never refused any reasonable request; from the Maternity Hospital on the clinical side and by help in training the students, from the local medical profession and midwives in sending specimens, from the medical students and from his staff. In lighter vein he recalled some of the trials and tribulations encountered in the early days: students had to go to Dublin for their "cases," the quarters provided in Liverpool being then mainly occupied by the valued factotum of another department installed as caretaker with his numerous progeny who were eventually peacefully persuaded to depart. The student, then, was summoned by the husband, who received a shilling for his services, and, as a shilling—in those days—was translatable into a number of "pints," which required time for their due appreciation, the usual irregularity of calls gave rise to some amusing tales; one student, after a quiet week, had a strenuous time, and as a result fell fast asleep at a case, to be awakened by the husband's vigorous shaking and "The nurse says 'if you don't wake up you will miss the baby.'"

Mr. Pridgin Teale of Leeds.

Full of years, full of honour, and high in the respect and love alike of the members of his profession and of the general public, Mr. Pridgin Teale celebrated, on June 28th, the ninetieth anniversary of his birth. Mr. Teale's professional career is known to all, and this is not the time for any lengthy comment upon his varied activities. A great surgeon, he has also been a great public man in the true sense of the term, and his opinion has been sought and valued by many. Mr. Teale's years appear to sit

lightly upon him, and he retains that youthful alertness of manner which has always been his characteristic. He loves to talk of old times, and with him a humorous story, if it be a good-natured one, never dies of age. No mere *laudator temporis acti*, he is still keenly interested in education, in the affairs of the nation, and in the progress of medicine and surgery. It was a great pleasure to Mr. Teale to receive congratulatory visits from many of his old professional friends, and he spoke to the writer of these lines of the joy with which these visits had filled him, and of how greatly he appreciated the kindness of everyone. Among the visitors was the Vice-Chancellor of the University (Sir Michael Sadler) who presented a letter from the Council and Senate, which was as follows:

"Dear Mr. Teale,

"On your ninetieth birthday we, the members of the Council and Senate of the University of Leeds, beg you to accept an expression of our affection and respect.

"We thank you for your service to Science and Medicine; for your labours on behalf of higher education in Leeds; for your share in the foundation of the University and for your devotion to its elder sister, the School of Medicine; for your sympathy with the young; for your alert and resourceful counsel; and, above all, for the example of your life.

"Your colleagues and friends of more than one younger generation join in cordial and grateful greetings to you, who, though the oldest among us, are still young in heart and mind."

The Board of Management and the Faculty of the General Infirmary marked the occasion in a very informal but pleasing manner by entertaining Mr. and Mrs. Teale to tea on the day following the anniversary. There was no speech making, but Mr. Teale was welcomed by the Board and the Faculty and by some of his old professional friends who had been invited. Two photographic groups were taken, one of the general company and another of the "Faculty," as the staff of the Infirmary love to designate themselves. There must be few hospitals which in the year 1921 include as a member of the staff, with the right to the use of beds, a surgeon who was appointed in 1864—the year when Mr. Teale began his long, useful, and honourable connexion with the General Infirmary at Leeds.

Pro-Chancellor of Leeds University.

When the University of Leeds was founded, in 1904, as a separate body on the disruption of the Victoria University the first Pro-Chancellor was found in the person of Mr. Arthur Greenhow Lupton, who was the Chairman of Council of the Yorkshire College. Mr. Lupton has served the university well. A first class man of business, a courteous and dignified gentleman, a conscientious and zealous friend to the university, he has been as a tower of strength to it in its earlier years. He has had the confidence of all, because his aims have been transparently honest and his methods have commanded respect. His resignation has been accepted with great regret. At a meeting of the Court of the University held on June 15th Mr. E. G. Arnold was elected as Mr. Lupton's successor. Mr. Arnold was Lord Mayor of Leeds in 1916, and is the head of the well known Leeds firm of stationers, printers, and publishers. In accepting the position Mr. Arnold was able to say that some forty years ago he had been an occasional student under Professor Rücker when the "Yorkshire College of Science," on which was founded the University of Leeds, began its career of usefulness.

Paying Patients at a Poor Law Infirmary.

The Bristol Guardians have been considering for some time past the question of allowing beds in the Southmead Poor Law Infirmary which are vacant to be utilized for paying patients who may not be able to secure accommodation in other hospitals. This will only be possible to a limited extent, as there is not much spare accommodation at Southmead, and the needs of the sick poor of the city have first to be provided for. The guardians have now approved the following arrangements, which are intended to afford assistance to patients whose means are just above the line of actual destitution.

Paying patients may, at the discretion of the Infirmary Committee, be admitted for treatment or operations when the accommodation there admits. Cases only will be entertained which need infirmary treatment, and who, on investigation, are found to be quite unable to pay the rates of charge made at private nursing homes or other available institutions.

Applicants must, in the first instance, produce a certificate of recent date from a medical man who has been attending the case within one month from the date of the application, such certificate to state fully the nature of the illness, and in the case of an operation considered necessary, the nature of the operation.

The weekly charge for ordinary treatment will be £2 2s. in one of the general wards, or £3 3s. per week where a single-bed ward or bed in a three-bed ward is required. This charge to include attendance from the infirmary resident medical staff. In the event of the services of one of the consultant medical officers of the infirmary being required, an additional charge of £1 1s. for each attendance of the consultant shall be paid, and in the event of an operation being required, a fee shall be paid for the services of the operating surgeon at the rate specified in a table to be arranged.

The private medical attendant of a patient so admitted may be allowed, subject to reasonable restrictions, to visit him in the infirmary and confer with the medical staff in reference to his progress.

Application for admission is to be made to the clerk to the guardians and not to the relieving officer.

Provision for Tuberculosis in Bristol.

The Bristol City Council has recently agreed to the recommendations of the Health Committee for a far-reaching scheme dealing with the treatment of tuberculosis. Provision for sanatorium treatment of pulmonary tuberculosis already exists, as well as municipal dispensaries for similar cases. In November last the Council sanctioned an appropriation for a certain number of beds at Lord Mayor Treloar's Hospital at Alton, Hants, for children suffering from tuberculosis requiring surgical treatment. The Council has now acquired a large country mansion and 70 acres of land known as Frenchay Park, on the northern outskirts of the city, where it is proposed to provide sanatorium accommodation for the treatment of so-called "pre-tuberculous" conditions in children—that is to say, children suffering from malnutrition and glandular affections suspected of being tuberculous in origin. The consent of the Ministry of Health has been obtained for the immediate provision of 50 beds at Frenchay Park, but this is regarded as merely a first instalment; it is hoped to increase the accommodation to 100 beds in the near future. The estate offers fine opportunities not only for extending the scheme, but by means of open-air schools to continue the education of the children under ideal conditions. There is every reason to anticipate that eventually there may be established a children's sanatorium on the lines of those in France at Berck-sur-Mer and Zuydcoote. For the present surgical cases will be sent to Alton, since considerations of economy render it inadvisable to embark on the necessarily heavy expense of building and equipping a new surgical hospital for these cases in Bristol.

Dr. D. S. Davies, M.O.H. for Bristol, has given the following classified table of institutional accommodation which has been sanctioned or already exists in Bristol for tuberculosis:

Non-pulmonary Tuberculosis.	
1. Provision for "pre-tuberculous" conditions in children	50 beds
2. Provision in special hospitals for surgical tuberculosis in children	30 ,,
3. Provision for adult surgical cases	6 ,,
4. Provision for other non-pulmonary forms (genito-urinary, etc.)	12 ,,
Pulmonary Tuberculosis.	
1. Sanatoriums for "early" cases	110 beds
2. Hospitals for "late" cases	93 ,,
3. Municipal dispensaries	2 ,,

The Bristol City Council would appear to be among the early converts to Calmette's views as to the necessity for commencing the combat against tuberculosis during infancy and childhood, and the efforts that are being made will be followed with keen interest.

Ireland.

Dublin University War Memorial.

The Provost of Trinity College, Dublin, writes:

I ask a little space to acquaint University men with the arrangements that have been now approved by the Executive Committee and by the Board of Trinity College as to the manner in which the 450 members of the College who fell in the war are to be commemorated.

The memorial is to take the form of a Hall of Honour in connexion with a reading room for the library which it is intended to build when funds permit. This, placed between the

library and the theatre, will extend some paces into the Provost's garden. An admirable design by Sir Thomas Deane has been adopted, which, while not impairing the architectural dignity of the library, will provide a beautiful as well as a useful building. Between £5,000 and £6,000 have been subscribed, but a much larger sum will be needed.

A meeting of the general committee will be held next term, and it is hoped that the treasurers may be able then to report a large number of additional subscribers, now that the precise form which the memorial is to take has been announced. I should add that the Gold Medallists' War Fund (which has no connexion with the official college memorial) amounts to over £1,400, and will be used to help in educating the sons and daughters of the Trinity men who died in the war. A list of all those who served has been prepared, and will be published at the end of the Long Vacation. Professor Fry will be glad to receive any additions to it that are sent to him.

Scotland.

St. Andrews University.

At a meeting of the St. Andrews University General Council on June 25th Principal James Irvine, who presided, intimated, before the election of two assessors on the University Court, that Dr. William Barrie Dow, of Dunfermline, did not seek re-election as one of the Council's representatives. Dr. Dow had held the office for thirty years, and only those who had been closely connected with the University could, the Principal said, realize the value of the services Dr. Dow had rendered. He had always sought to further the interests of medicine with enthusiasm, but with fairness towards the recognition of other subjects. The President concluded by proposing that the Council should formally record on the minutes its recognition of the work Dr. Dow had done for the University. This proposal was heartily accepted, and Dr. Dow then proposed Dr. Angus MacGillivray as his successor; in doing so he thanked the Principal and the members of the University Court for their kindness. Thirty years ago he had defended the independence of the University of St. Andrews when the College in Dundee wished to absorb the University and remove it to Dundee; ever since he had endeavoured to uphold the University and at the same time to aid the College in Dundee. Emeritus Professor McIntosh, who seconded the proposal, said that Dr. Dow had become a member of the University Court at a most critical period, when there were very few medical students at St. Andrews, but now the class-rooms were overflowing. This was largely due to the efforts of Dr. Dow and Dr. Balfour. Dr. MacGillivray was unanimously elected as assessor in succession to Dr. Dow.

University Fees.

By an Order in Council approval has been given to an increase in the matriculation fees at all the Scottish universities. The fees, which at present are one guinea for the winter and summer session combined and half a guinea for the summer session only, are to be raised to two guineas and one guinea respectively. The fees for examination in medicine are to be raised to £34 13s. The alterations are applicable on and after September 1st.

Correspondence.

NATIONAL PROVIDENT SCHEME FOR HOSPITALS AND ADDITIONAL MEDICAL SERVICES.

Sir,—Meetings of the medical profession are being held for the purpose of explaining to the general practitioner and popularizing the national provident scheme for hospitals.[1] At first sight the scheme on superficial examination may appear attractive, but this fallacy is quickly dispelled on closer investigation. In London it is hoped that five millions of the population will contribute £3,000,000 per annum—in other words, an average of 12s. per person per annum. What this means is better appreciated when dealing with smaller communities or individual practices of moderate size. Let us take, for example, an area containing 20,000 persons, who would under this scheme contribute £12,000 per annum. Is it seriously suggested that the cost of specialist treatment, including nursing facilities, ambulances, etc., for these people, only a small proportion of whom are ill, and of whom only a minute percentage would require specialist advice, would amount to this enormous sum? Let us consider another example—that of an ordinary moderate-sized general practice embracing 2,000 persons. These would contribute £1,200 per annum for specialist treatment, etc., which would be required by the very small number among them who would need it in the course of one year. The amount is preposterous.

Part of the money is to go towards financing the hospitals, which are, at the moment, heavily in debt. It will not be disputed that the hospitals should be supported by voluntary assistance, but if we examine the conditions for which patients generally attend the out-patient department of any hospital it will be found that a very large proportion of them could be treated quite satisfactorily by the general practitioner, were facilities—such, for example, as test meals, *x* rays, bacteriological tests, etc.—provided for him.

Furthermore, it would be conducive far more to the practitioner's efficiency were he able to keep his patient under continuous observation. The experience gained by the general practitioner during recent years has converted inexpert diagnosticians and poor operators into skilful physicians and excellent surgeons. In country towns consultants are the exception; nevertheless, the work is no less efficient and the results no less good, although it is entirely carried out by the local doctor. I will go farther and say that the country doctor is far more capable through being thrown on his own resources, and I think I can safely say that the cost is considerably less than that suggested by the scheme. If those cases which at present attend hospitals and which could be satisfactorily treated by the general practitioner could be eliminated, the hospital expenditure would drop considerably and the annual deficit probably dwindle to vanishing point. It was suggested by Mr. McAdam Eccles, who addressed a meeting at the Fulham Town Hall recently, that visiting consultants would receive a reduced fee of £3 3s. per attendance on the patient at the patient's home. If 5,000,000 persons come into the scheme and £3,000,000 is collected each year, and if eight-eightieths (£300,000 per annum) is earmarked for visiting consultants, it looks as if the consultant is going to make a good thing out of the scheme; £300,000 will pay for nearly 100,000 consultations—that is, one visiting consultation for every fifty persons per annum—an absurd estimate. Does a doctor with 2,000 persons to care for, only a small proportion of whom are ill, require a visiting consultant on forty occasions each year on an average?

What is wanted is not a scheme such as that suggested, but one that will enable the general practitioner to develop his knowledge and exercise his skill. Provide him with the facilities for diagnosis and treatment. Allow him to keep his patients under continuous observation and, even in cases of serious illness such as are ordinarily admitted to hospital, to treat them himself. Do not stifle his progress for the sake of providing lucrative incomes for the consultant, who appears to be the only person who is going to benefit by this scheme. Such a scheme as this will tend to make the general practitioner more and more inefficient and more and more reliant on other persons' brains instead of using his own.—I am, etc.,

London, W., June 28th. S. Caplan, M.D.

[1] Supplement, April 30th, 1921, p. 161.

THE PRIVATE CLINIC SYSTEM.

Sir,—All who were privileged to be present at the meeting of the Fellows of the Royal Society of Medicine on June 16th, when the important subject of the future of clinics in England was discussed (British Medical Journal, June 25th, p. 937), must have been surprised at the considerable advance there has been on the part of the profession towards accepting the principle involved. Not one of the many eminent speakers who took part in the discussion had a word to say against the system, and the only query raised was a fear of the difficulties that might arise if the medical profession were interested in the financial side.

I have considered this matter of finance very closely for several years past, and my firm were instructed, as solicitors, by a client who was prepared to invest a large sum of money for the purpose of starting a clinic with 200 beds, if he could be assured of the hearty co-operation of eminent surgeons and physicians in the work; and he

spent a considerable sum of money in getting the necessary data together. The many surgeons and physicians he and I saw agreed to all the plans my client formulated, but absolutely declined to have their names associated with it, as they feared that it would be contrary to professional etiquette. Owing to this withholding of medical support the scheme fell through, although my client's desire was only to receive a fixed small sum on the money to be invested by him, the whole profits of the scheme going towards improving the establishment and providing an adequate co-partnership account for the nurses and other employees working in the establishment.

In considering therefore the financial aspect of the clinic I venture to suggest that you must start with the principle that—

1. The medical profession should themselves provide the funds and leave no control to laymen, because control must follow the provision of capital.

2. It must also be accepted as a sound principle that no profits in the ordinary acceptation of the word should be derived by the medical men who finance the undertaking.

These two propositions appear on the face of them to be mutually destructive, and it was only after considerable thought that a manner in which they could be reconciled was evolved. I submit that it can be done in the following way:

(*a*) The clinic, when established, should be open to all members of the profession, who would be entitled to send and attend their patients there. It would also be open to the general public.

(*b*) Practitioners who paid an entrance fee of £100 (which would incidentally bear interest at 8 per cent. per annum) would have a first call on any vacant beds and the general services of the clinic holding a founder's bond.

(*c*) No medical practitioner should be allowed to hold more than five of the above bonds.

These proposals would eliminate any idea of the medical staff obtaining profits out of the clinic.

If these sums should prove insufficient, further bonds of a different category and having no controlling interest could be issued to large firms and individuals who might wish for preference in obtaining vacant beds for themselves, their families, or their clerks. I believe that if properly supported by the medical profession an amount would easily be subscribed sufficient to build a clinic on the most approved principles.

I do not think I need dwell further on other financial aspects, as most of the speakers were agreed that the personnel of the clinic would be run exactly as in hospitals, except that the consultants, specialists, and other members of the staff would be adequately remunerated. There would be the customary age limit over which professional men would retire, and there would also be a properly paid board of directors or governors of the committee.

In regard to the profits themselves, I do not think the speakers made sufficient point as to the value of continuity of well-trained and capable nurses. My proposal is that, after the payment of a fixed 8 per cent. dividend on the founders' shares, the profits would go 75 per cent. on co-partnership lines to the nursing staff and employees of the hospital and 25 per cent. to improving and extending its work.

I have tried to confine my suggestion within the limits of your columns, but if any member of the profession who is interested in the matter would care for more fully worked out details they are entirely at his disposal.—I am, etc.,

P. H. EDWARDS.

33, Southampton Street,
London, W.C.2, June 23rd.

RADIUM THERAPY IN UTERINE CANCER.

SIR,—Mr. Hayward Pinch's experience, as medical superintendent of the Radium Institute, in radium therapy and the end-results of treatment, is probably unequalled in this country, so that his remarks under the above title in your issue of June 18th will be received by the profession as an authoritative statement of the present position of the treatment of this dire malady by this method.

For some time past I have been trying to find out by inquiry among professional brethren whether they had ever met with a permanent cure of cancer of the cervix by radium or *x*-ray treatment, with a negative result, and this agrees with my own experience.

I regard Mr. Hayward Pinch's remarks on the ultimate prognosis as so important that I quote them verbatim.

"In some cases the improvement, both local and general, has been so great as to induce the hope that the disease had been completely arrested and the patient apparently cured, but unfortunately sooner or later symptoms have appeared indicative of the infection of parts beyond the effective range of radium, and the disease has slowly progressed to a fatal termination."

At the present time, if I may use the expression without any disrespect, treatment by radio-therapy is rather a vogue, and from the repeated references to it in the lay press as a cure for cancer, I fear that not only the public but also the profession may be misled as to what may be expected from it.

We have all met with the most astounding improvement in cases of uterine and other forms of cancer with radium, but unfortunately the improvement is not permanent. These remarks, I believe, apply with equal truth to the treatment of uterine cancer by *x* rays and to mammary cancer by both forms of radio-therapy, although there are some who hope that with the new German apparatus and technique permanent cures may, with the lapse of time, be recorded.

I am glad to see that Mr. Pinch emphasizes the fact that early operation still holds out the best prospect of permanent cure, particularly if followed by a thorough course of prophylactic irradiation, which, I believe, will prove a great aid in improving the results of operations for cancer.

I have recently seen a case of cancer of the cervix, and in the same week I received a letter from another patient, in both of whom I performed hysterectomy by Wertheim's method in 1906, and they are both well. A third case, operated on in 1911, recently returned with a small recurrence in the vaginal roof after ten years of freedom. At the moment there appears to be a tendency to fall in with the views of patients who dread operation, and to treat them by radio-therapy without operation, for in the records before us it does not appear that the time has yet arrived when this course can be justified, as the results of radio-therapy do not yet equal those of surgery.—I am, etc.,

London, W., June 28th. DOUGLAS DREW.

AURICULAR FIBRILLATION.

SIR,—Sir James Mackenzie, in his lecture delivered at St. Mary's Hospital, and published in the BRITISH MEDICAL JOURNAL, says, under the heading, "The records of mitral stenosis": "Many instructive phenomena which explained features that had puzzled clinical observers came under notice during this research. But the most striking and most dramatic was the sudden onset of extreme heart failure that every now and again overtook some of these patients." Later he adds: "Many years after this condition was discovered from experimental research to be due to fibrillation of the auricle."

This seems to me much as if a teamster, whose heavy cart had pulled the horses up, were to assert that the irregular effort of one and another of the horses to pull alone, often observed after the arrest, accounted for the stoppage. The fibrillation of the auricle or the fibrillation of the team, comes on after the breakdown. It may be an indication of the breakdown, but it is by no means the cause.

Extreme heart failure in mitral stenosis, coming on suddenly, may be due, physically, to dilatation of the auricle, or, physiologically, to its muscular exhaustion, either of which would explain the breakdown; and it is misleading to attribute it to the fibrillation which follows. One often sees exhausted or dying skeletal muscles fibrillate, but one does not attribute either the death or the exhaustion to the fibrillation, but the reverse.

It seems to me that we should make more progress towards the knowledge of cardiac action if we could get back to the simplicity of earlier writers and teachers, who spoke of cardiac dilatation or cardiac exhaustion, instead of exalting such a secondary phenomenon as auricular fibrillation into the false position of a primary cause.

Now that nearly every paper on the heart is rendered almost unreadable by innumerable and unconvincing tracings, and befogged by shibboleths such as auricular fibrillation, nodal rhythm, the bundle, heart-block, etc., we

shall all soon in despair, and as a natural reaction, be driven to Sir James Mackenzie's simple remedy, and, like him, scrap our science, and judge or misjudge the heart by its "response to effort."

Clyst St. George, Devon, June 13th. D. W. SAMWAYS.

THE PREVENTION OF PUERPERAL INFECTION.

SIR,—In the discussion on puerperal infection it seems to be taken for granted by all your correspondents that the initial cause is conveyed from without by the doctor, the nurse, or the insanitary surroundings. After an experience of about 2,000 cases, with one death from puerperal convulsions in a case of nephritis and one from puerperal fever, I believe that in ninety-nine cases in a hundred the cause of infection is the retention of some small portion of the membranes or the placenta, or possibly, occasionally, of a decomposing blood clot. Having seen several times the method of expelling the placenta by external compression I am convinced of its dangers. The uterus will perform its function of squeezing the placenta and membranes into the vagina in a beautifully perfect manner by contraction of its whole body, posterior as well as anterior, in from five to fifteen or even thirty minutes. No hand on the abdomen can imitate this universally even pressure. Some persons, male and female, are naturally clumsy, and I can recall a case where the compressing fingers had divided the placenta into two parts, with disastrous results. The uterus should be supported with gentle pressure to aid it in its work, but squeezing, and especially kneading, should be avoided. If the uterus has emptied itself it should be allowed to rest, and not be subjected to the pressure necessary to eject the placenta from the vagina. I can imagine stretching of the suspensory ligaments and prolapsus following that manœuvre.

I do not see how a placenta can be located for certain in the vagina without a digital vaginal exploration. I have been satisfied for nearly forty years with the method I have always employed, and I have not considered the time wasted in waiting fifteen, thirty, or sixty minutes for the placenta to be found in the vagina entire with the membranes. Immediately on separating the child I give two or three drachms of ergot and acetic acid (2 + 1), then, when the cord is cold and pulseless, taking it in the right hand and using it as a guide to two fingers of the left hand introduced into the vagina, I find whether it is in the vagina or not. If not, after washing my hands I support the uterus with gentle pressure of the left hand. One can generally feel then when the placenta passes out of the uterus. If the placenta is in the vagina, keeping it in position with the cord in the right hand but not pulling hard on it, the two fingers of the left hand can slip over the edge of the placenta to keep it on a flat axis. A few coughs from the patient will discharge the placenta, which should be retained near the vulva while it is turned round six or seven times, and the membranes will follow as a thin rope, no particle being left behind. When young, and perhaps impatient, I used to be bothered with *post-partum* haemorrhage, but since using the acetic acid and ergot immediately on the birth of the child I have not been troubled.—I am, etc.,

June 17th. AN OLD MEDICAL.

SIR,—Dr. Blair Bell's address on the prevention and treatment of puerperal infections was a tissue of remarkable assertions, which he directs at the general practitioner, and for which he does not advance the slightest proof. It is a type of the stuff assimilated by many medical students, who finally become qualified, retaining the fixed idea that the general practitioner is a feeble-minded species compared with the medical and surgical supermen who give lectures, and who really ought not to have been ever let loose amongst the long-suffering general public.

Dr. Blair Bell begins by drawing conclusions from the Registrar-General's report. What these conclusions are worth may be gathered from the rest of his conclusions; indeed, he has been kind enough to make a summary. Here are a few samples:

The athletic girl will have difficult labour.
The woman with nerves will not willingly tolerate a tedious, inert labour.
A piece of unpurified vulval skin will be more deadly than a spoonful of faeces.
The remedy does not lie in better teaching.
Imperfect asepsis is practised as a sop to conscience.
The evacuation of *large pieces of placenta* should be practised after infection has taken place.
An attempt is usually made to repair a laceration.
Some amount of healing usually takes place.
Forceps are employed to appease an anxious husband.

All of these are priceless conclusions. The BRITISH MEDICAL JOURNAL seems to have been so impressed by them that special remarks apparently have been made showing how nice it would be if the wretched general practitioner always turned up late to the case. This wonderful Dr. Bell employs wonderful midwives who know how to keep the bowel absolutely empty, always, in all cases; and he is so sure when a tear is to happen that he puts in sutures beforehand. We await with some impatience more information, and yet it is only just to say that the general practitioner knows his work quite as well as Dr. Bell, and he may even know his work better than Dr. Bell. He can at times remove an ovarian cyst, or do a colporrhaphy or a hysterectomy in a manner which would open the eyes of Dr. Bell, with not half the skilled assistance the latter gets. He, the general practitioner, is a very busy man, and he is in competition with some of the best brains in the world, and with men who are equally as brave as Dr. Bell.

When the general practitioner is called out to Mrs. A. at 3 a.m. on a wild night, five miles away, he goes, knowing more about Mrs. A. than Dr. Bell could ever know; and he also knows a heap about Mr. A.; and he has been chosen to attend on this anxious and momentous occasion not because he is the only feeble prop to lean on but because he has achieved a reputation which has to be kept up in sickness and in health, even at 3 a.m., after a hard previous day. If Mrs. A. goes septic a lot of explanations will be wanted, very many more than Dr. Bell ever imagines; not only that, but the reputation hangs on bringing Mrs. A. (and her child) through without any after-effects at all. Therefore the general practitioner's conclusion is that if he knew as much about his work as Dr. Bell he would get little kudos and less little wheels to run the house on.

When the general practitioner says "forceps" he knows what he is talking about, and although he was never half taught his job until he saw and helped other general practitioners at work, he now might probably astonish Dr. Bell with his management of any midwifery case, including locked twins and two-headed monsters; but he does not start in and write about these things, because for one thing he has not time, and for another there are too many Dr. Bells about; and if a general practitioner thinks that prolapse is as frequent after unassisted labour as otherwise he has come to that conclusion in the best way of all—in the school of experience; and if he thinks that sepsis can and does occur without any manual interference he is not talking rubbish.

Some have seen septic matter taken from the vagina at the onset of labour, and some have seen septic children born unaided, and some *have heard of septic tubes throughout pregnancy*, and if they had never tried to combat these things with more gumption than Dr. Bell seems to think we should never have been the nation that we are.—I am, etc.,

Morecambe, June 22nd. FRED. W. HOGARTH.

ENUCLEATION OF THE TONSILS.

SIR,—In the JOURNAL of June 18th, p. 916, Mr. Mark Hovell calls attention to the danger of haemorrhage after tonsillectomy. Many of us who are concerned with doing hundreds of tonsillectomies in a year, will support his attitude. That the danger is real, and that it occurs with a frequency seriously to call in question the justification for the operation, is undoubted. Any surgeon who has had to suture the faucial pillars in a child, already in a bad way from loss of blood, under an anaesthetic sufficiently deep to abolish the pharyngeal reflexes, and who has to contend with the difficulty of keeping the operation area free from blood, where both tonsillar fossae are bleeding, can scarcely fail to acquiesce in this view. My personal feeling is that where, in addition to these troubles, the little patient presents posterior pillars that tear like wet blotting paper, the surgeon is entitled to much sympathy.

Whatever Mr. Hovell says on this subject is worthy of consideration, and I suggest to him that he does us all a greater service than he has yet done—and that is, tell us

what he means by a "diseased" tonsil. As far as children are concerned, I frankly confess I do not know. I know a large tonsil when I see one; but even here the enlargement is more apparent than real, as is evidenced on its removal. The size of buried tonsils cannot be estimated; the position of the tonsil in its bed will give a mistaken idea of its actual size. Many tonsils are already partially dislocated from their bed, with the result that practically the whole of the tonsil is visible and ostensibly large. But, apart from all this, What is a "diseased" tonsil in children? What pathological appearance does it present? Even enlarged cervical glands may not be due to sepsis from a tonsil; but may be merely a part of the general lymphadenomatous enlargement common in healthy youngsters.

I am practically never able to look into a child's mouth and say: "That child's tonsils are not only 'enlarged' but they are also 'diseased'!" I write in no spirit of criticism. I am asking for information and help. Will Mr. Mark Hovell give it? If *he* cannot, then assuredly no one can.—I am, etc.,

June 22nd. CLINIC.

VOLUNTARY HOSPITALS COMMITTEE.

SIR,—Dr. R. C. Buist's letter in your issue of June 25th was apparently written without a full knowledge of the objects and working of the Contributors' Certificates Scheme in operation at this hospital. In estimating the "value," one of the first considerations is, of necessity, its financial possibilities, as the problem hospitals are now facing is how best to obtain funds to keep open. But the scheme is in no sense a variety of the old "subscriber's line," which, besides giving a several hundred per cent. return on contributions, has all the disadvantages mentioned by Dr. Buist. Contributors' certificates form a sound business proposition, offering value for money, and, in addition, afford unique facilities for providence, in that those who look to the hospitals for treatment in times of sickness can provide for the cost of such treatment when in health, and the hospital can build up a reserve against the expenditure to be incurred when the certificates are presented.

The Great Northern, in common with other hospitals, now has to ask patients who can afford to do so to contribute towards the cost of their treatment, according to their means. The necessitous sick are received free of all charges, as heretofore, and we do not ask them to produce contributors' certificates in lieu of cash. Those patients assessed to contribute and holding contributors' certificates can present such certificates, and we accept them at face value towards the amount of the contribution.

It will thus be seen that contributors' certificates in no way influence admission. The names of all patients are placed on a waiting list, and admitted purely in order of medical urgency. In short, the certificates are a recognition of contributions received towards treatment to be given at a later date.—I am, etc.,

Great Northern Central Hospital, London, N., June 30th. GILBERT G. PANTER, Secretary.

DEFECTS IN TUBERCULOSIS ADMINISTRATION.

SIR,—A short time ago, your correspondent "Mixture" (BRITISH MEDICAL JOURNAL, June 4th, p. 839) called attention to overlapping and confusion in connexion with the duties of the county medical officer and the medical officer of health for a county district in connexion with the recent tuberculosis regulations, but, had he wished to expose a still more glaring instance of this kind, he would have found ample material in the rules of the Central Midwives Board and other regulations governing the midwifery service of the country.

For example: When a midwife commences work in a district "notice of intention to practise" as well as "change of address" must be communicated on a special form to the "Local Supervising Authority," which means actually to the county medical officer (Midwives Act, 1902, Sec. 10 and Rule 22 (2) C.M.B.), but no communication of the kind need be sent to the local medical officer. It must be presumed that the latter knows by intuition who and where the midwives of his district are, for by Sec. 1 (3) of the Notification of Births (Extension) Act, 1915, in cases where the county council has not previously adopted the Notification of Births Act, 1907, it is the duty of the local authority (in this case the medical officer of health of the district) "to bring the provisions of the principal Act to the attention of all medical practitioners and midwives practising in the area." He is also required to supply to them, without charge, addressed and stamped postcards containing the form of notice of birth (Notification of Births, Local Government Board circular dated July 29th, 1915, page 2), as well as forms for the notification of ophthalmia neonatorum (Art. III, Ophthalmia Neonatorum Order, dated February 5th, 1914). The midwife is one of the persons upon whom falls the duty of notifying the event of a birth, and this notification, according to the Act of 1907, Sec. (1), goes to the "medical officer of health of the district in which the child is born," while he, in turn, is required by Sec. 1 (2) of the Act of 1915 to send duplicates of these notifications to the county medical officer "as soon as may be after they are received." In the event of specified untoward symptoms arising in connexion with the mother or child, the midwife must send for medical aid and notify the local supervising authority (county medical officer) of the fact (C.M.B. Rules, No. 22), but when there is a purulent discharge from the eyes of the child commencing within twenty-one days from the date of birth and medical aid has not been obtained, she must notify that fact to the local sanitary authority—that is, to the medical officer of health for the district (Rule 21 (5) and Art. VI, Ophthalmia Neonatorum Order, February 5th, 1914), or again, whenever a midwife has been in contact with a patient suffering from any infectious ailment, she must notify the local supervising authority (county medical officer) of the fact, and "unless otherwise directed by the local supervising authority, all washable clothing must be boiled, and other clothing must be sent to be disinfected by the *local* (not the county) sanitary authority" (Rule E 6). In a footnote to this rule the midwife is advised to "ascertain who is the appropriate sanitary authority" by inquiring of the inspector of midwives, or of the local supervising authority; and so it goes on, one duty to be performed by one medical officer and one by another, while the confusion is rendered worse confounded by cross references from Rules to Orders and Orders to Acts. It is small wonder, then, that the midwife, in a hopeless muddle as to which is the "local supervising authority" and which the "local sanitary authority," and who is the "county medical officer," and who the "medical officer of health," sends one form here and the other there, as may be, leaving it to the clerical staff of the respective authority to sort them out.—I am, etc.,

Maidenhead, June 22nd. JAMES J. PATERSON.

SUGGESTED AUTOINOCULATION OF RODENT ULCER.

SIR,—Dr. Dyke, in your issue of June 25th, 1921, p. 932, relates the case of a woman of 71 who had a long-standing rodent ulcer of the sacro-iliac region and a more recent lesion of the same type in the site of a wound on the chin. Although the frequency of multiple rodent ulcers is recognized, Dr. Dyke suggests the possibility of autoinoculation, but remarks that autoinoculation had not previously been suspected in the case of rodent ulcer.

In 1902 I had under my care an old naval pensioner with an extensive rodent ulcer of the scalp of many years' duration, and his niece, who lived with him, and who had dressed the ulcer twice daily for a long period. She, a girl of 17, had a small linear rodent ulcer on the right lower lid. In both cases the lesions were examined microscopically. I thought the girl's ulcer might have been due to inoculation and placed the facts before the late Sir Henry Butlin, who was collecting cases of supposed cancer infection. He decided, and I think rightly, that the evidence of infection was insufficient.—I am, etc.,

London, W., June 28th. JAMES H. SEQUEIRA.

ESSENTIAL HAEMATURIA.

SIR,—The profession will doubtless have read with deep interest and appreciation Mr. Fullerton's illuminating remarks on haematuria in the JOURNAL of June 25th, p. 923. He makes special reference to the difficulty sometimes experienced in controlling haematuria of the "essential" type. Probably the chief difficulty in dealing with this "symptomless renal haematuria" is that so far its causation is not understood.

My only reason for troubling you with this short note is to refer to the distinct value attaching to the use in such cases of gallic acid, administered in 5-grain doses three times daily, increased if necessary to 15 grains. This simple remedy will frequently check the bleeding when other remedies have failed, and should certainly have a full trial before resort to the various formidable surgical methods which Mr. Fullerton catalogues under the heading "treatment."—I am, etc.,

Wednesbury, June 27th. WALTER GARMAN.

COCCYGEAL FISTULAE.

SIR,—Mr. Lockhart-Mummery, in his letter of June 24th, still does not appear to realize that the congenital coccygeal fistula and the sinus over the sacrum and coccyx are two totally distinct conditions.

He appears to consider, also, that microscopical examination of suspected cases of sinus over the sacrum and coccyx would in all instances reveal their congenital origin. I would point out, however, that the microscopical appearance depicted in the illustrations of his original contribution in your issue of June 4th are not in the least convincing in this respect. They certainly show an epithelial lining, but the real structure of the wall of a dermoid cyst is conspicuous by its absence. In one illustration, in addition to epithelium, the presence of giant cells is shown, but these latter are surely more suggestive of either a tuberculous lesion or chronically inflamed tissue. The epithelial lining shown in these illustrations is more in keeping with the appearance which one would expect to find in the wall of a sebaceous cyst. Sebaceous cysts, wherever found, are especially prone to suppuration and often give rise to a persistent and troublesome sinus which does not heal because part of the epithelial-lined cyst wall remains behind. Sebaceous follicles, often of large size, abound in the peri-anal region and are a fruitful source of a type of subcutaneous fistula which is frequently met with in the vicinity of the anus. These fistulae never communicate with the interior of the rectum. They are often found to have several off-shoots from the main track, and the portion of that track which was the original sebaceous cyst occasionally is found to have an epithelial lining. It is probable, therefore, that the cases from which the above mentioned illustrations were made were examples of this kind of fistula.

I agree with Mr. Lockhart-Mummery that one would not expect to find teeth in an inclusion dermoid, but we have it on the authority of Sir John Bland-Sutton that post-rectal dermoids are remarkable in that they usually contain teeth.—I am, etc.

London, W., June 25th. W. ERNEST MILES.

PROFESSIONAL SECRECY.

SIR,—As a witness in the Divorce Court quite recently before Mr. Justice Hill, I applied for protection when asked a question which to answer would have been a clear breach of professional confidence; the judge at once granted the protection applied for, observing "that he could not hold the question an improper one, but that he understood my position"; he proposed to counsel to get the information the court required in another way.

It would appear, then, that there is no definite rule. Indeed, an habitué of the court told me that Mr. Justice ——— would have "jumped down my throat" and insisted on a reply.—I am, etc.,

London, S.W., July 2nd. F. E. H. DAUNT.

COLONELS AND LIEUTENANT-COLONELS R.A.M.C.

SIR,—I was astonished to read in the daily press that a certain number of colonels Army Medical Service, were to be retained for over four years on full pay. Surely this change is a waste of public money and unjust to junior officers awaiting promotion? Before the war there were about twenty colonels A.M.S., now there are thirty-six. There is no useful work for half of them. The condition is much the same with regard to lieutenant-colonels R.A.M.C. Before the war there were about 100 lieutenant-colonels; now there are 158, and half of them are doing work that would be better done, at a less expense to the country, by a junior officer.

In other branches of the army a lieutenant-colonel has to go after four years' service in the rank. This should also apply to R.A.M.C. It would relieve the block in promotion of majors. No major R.A.M.C. has been promoted since 1918, and no such promotion is likely for many more years.—I am, etc.,

July 4th. MAJOR R.A.M.C.

The Services.

ARMY MEDICAL SERVICE.

Uniform of Higher Ranks.

WE drew attention some time ago (SUPPLEMENT, February 26th, p. 49) to the dissatisfaction caused by the Army Order altering the dress distinctions on the cap and tunic of general officers and officers of the administrative staff of the Army Medical Service. We have received from a young officer R.A.M.C. serving in India a letter from which we make the following extracts. His remarks show how deeply the change in the uniform of the higher ranks is felt, even by those who may never attain to them.

"It is very gratifying to members of the British Medical Association serving in the Royal Army Medical Corps in India to know that our Association is alert to the fact that this is an attempt finally to put the Royal Army Medical Corps in what might popularly be described as 'in its place.' This is a policy which does not specially involve that portion of the Royal Army Medical Corps serving in India. It was undoubtedly evolved in the War Office, and India merely follows suit. I have written this 'note' on the subject in consultation with a few of my brother officers in India.

"In the Army Order (No. 539) above referred to certain distinctions in dress are ordered for colonels and general officers of what is variously described as 'Medical Services' and 'Army Medical Service.' The former ranks will apparently wear dull cherry gorgets and hat bands, and the latter will be distinguished by the same emblems in black velvet.

"By a Royal Warrant dated June 26th, 1898, all officers of the then Army Medical Staff below the rank of Surgeon-General and the warrant officers, non-commissioned officers and men were constituted into the Royal Army Medical Corps—a corps of the British Army within the full meaning of that expression and included in the constitution of the British Forces (vide chap. xi, para. 5 of the *Manual of Military Law, 1914*, in conjunction with which may be read Section 190, para. 4). Surgeon-Generals alone then formed the Army Medical Staff. Under a Royal Warrant dated June 9th, 1907, the Army Medical Staff was abolished, and Surgeon-Generals were classed as removed from the Royal Army Medical Corps, and substantive Colonels, previously on the cadre of the Royal Army Medical Corps, were similarly removed.[1] In 1917 the rank of Surgeon-General was abolished and substituted by the ranks of Lieutenant-General and Major-General, subject to the proviso that general officers from the Royal Army Medical Corps should not exercise general powers of command unless specially authorized to do so.

"We have, therefore, up to this period an orderly train of progress in the advancement of the status and recognition of the value of the work contributed by the medical profession in the British Army. This advance continued undisturbed through the greatest war in history. Few would debate that this was other than honourable recognition of equality of work, by the admission of the military branch of the medical profession to that equality in rank and status which had previously been denied them. The present movement to introduce distinctions in dress for the higher ranks of the Medical Services is retrograde, and if carried into effect will cause humiliation, loss of authority, and put the corps back to where it was twenty years ago. It is an invidious distinction, and will be looked on by other services in the Army as such."

TERRITORIAL DECORATION.

THE Territorial Decoration has been conferred upon the following officers:—*Territorial Force, R.A.M.C.:* Lieut.-Colonel David L. Hamilton (2nd Home Counties Field Ambulance); Lieut.-Colonel Charles L. Isaac (3rd Welsh Field Ambulance); Major George R. Wilson, attached 8th Battalion, Manchester Regiment; Major David H. Weir, M.C., attached 4th Battalion, Royal Northumberland Fusiliers; Major William F. McAllister-Hewlings, attached North Midland A.S.C. (retired); Major Edward L. Rowse (1st London Field Ambulance). *Territorial Force Reserve, A.M.S.:* Colonel Sir Richard H. Luce, K.C.M.G., C.B., V.D. (honorary Colonel R.A.M.C. T.F., honorary Major-General in Army).

DEATHS IN THE SERVICES.

CAPTAIN GERALD LEWIS COLHOUN LITTLE, Indian Medical Service (retired), died at Midgham, Berkshire, on May 30th, aged 37. He was the only son of Colonel Charles Little, I.M.S. (retired), was born on October 2nd, 1883, and educated at Edinburgh, where he graduated M.B. and Ch.B. in 1907, subsequently taking the F.R.C.S.Edin. in 1914. He entered the I.M.S. on August 1st, 1908, and was promoted to captain after three years'

[1] Paragraph 13 (Definitions) Royal Warrant, 1914, is as follows: An "Officer of our Army Medical Service" shall include a surgeon-general, a colonel removed from our Royal Army Medical Corps, an officer of that corps, or a medical officer of our Household Cavalry.

service; he was on temporary half pay, on account of ill health, from November 15th, 1914, to December 5th, 1915, and retired from the same cause on February 5th, 1920.

Surgeon Gerald Burton-Brown, R.N., retired, died at Maidstone on April 21st. He was the youngest son of the late Brigade-Surgeon T. E. Burton-Brown, C.I.E., I.M.S., and was educated at Guy's, where he gained an entrance scholarship, and at Durham University, where he graduated M.B. and B.S. in 1898, and M.D. in 1905, having previously taken the L.S.A. in 1896. After acting as clinical assistant in the throat, ear, and eye department in the Newcastle-on-Tyne Infirmary, he entered the navy as surgeon on May 23rd, 1898, but retired early with a gratuity.

Obituary.

WE regret to record the death of Mr. HENRY WORK DODD, which took place on June 28th, at his residence, 136, Harley Street, W., in his sixty-second year. Mr. Dodd was the son of the late Mr. Charles Dodd, of the Hudson Bay Company, and was born at Victoria, Vancouver Island. He was educated at Norwich School and at St. Bartholomew's Hospital, obtaining the diploma of M.R.C.S. in 1881. He proceeded to the Fellowship in 1888, and in 1890 he was appointed to the ophthalmic department of the Royal Free Hospital, becoming later clinical lecturer on ophthalmology and eventually consulting surgeon. He was also consulting surgeon to the Royal Westminster Ophthalmic Hospital and consulting ophthalmic surgeon to the West End Hospital for Nervous Diseases. Formerly a member of the R.A.M.C. Volunteers, he had retired with the rank of major. Mr. Dodd was a member of the Ophthalmic and other medical societies; he had contributed a large number of papers on ophthalmic subjects to medical and scientific literature.

THE death is announced on April 24th of Dr. ARCHIBALD L. MUIRHEAD, professor of pharmacology, and formerly dean of the College of Medicine of Creighton University, Omaha, who was for eight years editor of the *Medical Review*. Dr. Muirhead was a graduate of the medical school of the University of Michigan in 1893.

Universities and Colleges.

UNIVERSITY OF OXFORD.

THE following candidates have been approved at the examinations indicated:

M.CH.—G. Perkins.

SECOND M.B.—*Materia Medica and Pharmacology:* M. McC. Baird, O. D. Ballinger, W. Champneys, E. F. Chapman, H. N. K. Elphick, R. van B. Emmons, R. V. Facey, H. A. Gilkes, J. R. B. Hern, R. F. Johnstone, C. R. Lane, W. J. E. Lupton, P. H. Martin, J. D. Mills, E. H. Watkins, Norah E. Bodkin, Katharine M. Hodgkinson, Constance M. Ottley. *Pathology:* J. W. Alden, O. D. Ballinger, W. H. Butcher, W. Champneys, D. S. Davies, J. H. Fletcher, D. G. Leys, H. D. Pavière, M. E. Shaw, E. H. Watkins, B. W. Williams, Norah E. Bodkin. *Forensic Medicine and Public Health:* T. H. Cathrall, M. H. Mackeith, H. A. Osborn, M. E. Shaw, C. H. Terry, C. J. L. Wells, Dorothy J. Collier. *Medicine, Surgery, Midwifery:* W. H. Butcher, D. G. T. K. Cross, C. F. T. East, W. E. Hayes, E. G. T. Liddell, M. H. Mackeith, H. L. Rayner.

UNIVERSITY OF CAMBRIDGE.

THE following candidates have satisfied the examiners in Parts I and II of the examination for the Diploma in Medical Radiology and Electrology (Part I, Physics and Electrotechnics; Part II, Radiology and Electrology):

F. M. Allchin, S. Colyer, G. Fildes, H. Gardner, W. Garton, A. H. Laird, T. Leucutia, D. B. McGrigor, D. M. Muir, H. E. H. Oakeley, P. J. Olivier, B. Shires, H. W. J. van Dijken, J. D. White, G. D. Whyte, W. P. G. Williams, J. R. Wylie.

A. Flett has also been approved in Part I, and J. P. S. Dunn in Part II.

UNIVERSITY OF LEEDS.

Graduation Ceremony.

AMONG the large number of degrees conferred at a congregation of the university held on July 2nd were the following:

M.D.—Hartley Carter.

M.B., B.S.—*G. Armitage, †G. D. Fleming, †C. M. Smithies, †N. Walsh, Effie G. Bolton, J. M. Davey, T. H. Elmer, Bessie Goodson, Ella M. Hickman, I. Hipshon, R. N. Kirk, R. W. Lee, A. Sourasky, and Kathleen Wilson.

D.P.H.—J. Gordon, A. Massey, and W. S. Sykes.

* First-class honours. † Second-class honours.

UNIVERSITY OF DURHAM.

AT a convocation held on June 28th the following degrees were conferred:

M.D.—J. W. Craven, R. Errington, H. M. Leete, W. K. Russell, J. C. Spence, H. W. Walther.

M.D. (*for practitioners of fifteen years' standing*).—S. Bott, H. Chaffer, F. A. L. Hammond.

M.S.—H. Evers, W. Reynolds.

M.B., B.S.—S. E. H. Anderson, T. H. Bates, J. S. Brogdon, E. T. Colville, O. Colville, J. J. N. Daniels, Dorothy A. Dixon, Dorothy E. Elliott, E. Girgis, G. A. Haydock, R. Hewitson, R. A. Hickley, D. F. Hocken, W. E. D. Hodgson, E. V. Howard, Hilda Lodge, M. Mickler, L. Myers, Joan W. Nicoll, R. J. Perring, S. T. Pybus, Mary F. Richardson, W. C. Wardle.

B.S.—J. E. Basham.

B.HY.—C. N. Armstrong, Edith C. M. Jones, M. D. Mackenzie, T. N. V. Potts.

D.P.H.—C. N. Armstrong, Edith C. M. Jones, F. J. Lidderdale, M. D. Mackenzie, T. N. V. Potts, W. O. F. Sinclair.

The following candidates have been approved at the examination indicated:

THIRD M.B., B.S.—*Materia Medica, Pharmacology and Pharmacy; Public Health; Medical Jurisprudence; Pathology and Elementary Bacteriology:* C. J. C. Jones (with second class honours), R. B. Allen, R. Armstrong, Helen Austin, Monica F. Bell, T. H. Blench, E. C. Brewis, W. N. Douglas, C. Fenwick, C. C. Fenwick, Gladys H. Fletcher, G. A. Fothergill, C. J. B. Fox, W. Graham, Irene B. M. Green, W. A. Hogg, Gwendolen M. Hunton, E. H. Jacques, Katherine M. C. Jones, E. S. Kirkhouse, J. H. Laydon, Florence M. Menzies, Doris H. Motyer, F. G. Mundell, L. F. O'Shaughnessy, G. C. Parkin, Georgina L. Philipson, H. N. Popham, S. D. Rowlands, Evelyn M. Scott, A. Todd, R. F. Tredre, A. J. Watson, N. H. Watson, E. A. Welsh, J. C. Yeoman.

UNIVERSITY OF EDINBURGH.

THE following candidates have been approved at the examination indicated:

FINAL M.B., CH.B.—J. B. Aitken, G. J. Alexander, S. E. Ammon, T. F. Andrew, Flora T. F. Angler, G. R. A. Armstrong, C. W. Badger, F. E. L. Beck, Rosa M. Bickerton, J. M. Bosman, W. H. S. Boyd, Maeve C. Brerton, A. S. Burns, D. I. Cameron, J. Campbell, E. E. Candlish, E. A. Carmichael, Edith K. Chandler, J. H. Clarke, Jessie M'C. Craig, Grace Cumming, E. D. Dingle, W. Douglas, A. Dower, S. J. Eapen, G. D. English, H. D. Epstein, Isobel M. Finlayson, E. M. Fraser, *J. S. Fulton, Katharine M'L. Gifford, Elspeth L. Gilmour, Mary H. M. Gordon, O. Gray, Helen Gregory, Adele Haggart, A. A. Hamilton, Mary I. Hemingway, H. Hodgson, N. R. H. Holmes, Helen R. T. Hood, R. Howarth, J. W. A. Hunter, J. F. Iddekinge, F. T. Ingram, V. W. Jack, E. S. Jackson, J. D. Johnston, P. R. Kemp, F. Krone, J. R. Larson, Laura M. Ligertwood, J. I. M'Caa, A. G. M'Clellan, Eliza W. M'Crae, A. Macdonald, Agnes B. MacGregor, R. G. M'Intyre, A. G. Mackay, D. F. Malone, Dorothea J. Mann, Margaret B. Martin, Nancy Martland, A. D. Maxwell, Isabella M. Mears, P. S. Meiring, C. E. Meryon, Mary Middlemass, Catherine A. J. Mitchell, Ruth M. Monro, D. M. Morison, Helen S. E. Murray, Jean Murray, P. N. Nag, C. S. Nimmo, O. A. Omololu, M. M. Ostrowick, C. G. Payton, C. S. G. Pillai, Mary E. Price, Margaret M. Proudfoot, Margaret T. Rutherford, Marjorie E. F. Sanders, C. E. Scott, Hilda D. Scott, J. Sharp, L. Siff, G. J. Smit, M. T. Smith, H. W. J. Steen, C. Stewart, J. D. Stewart, Jenny R. Tait, R. J. O. Taylor, E. K. R. Thomas, H. B. Thomson, Sophia M. R. Thomson, P. H. J. Turton, J. Veitch, J. H. Verwey, T. J. M. Walker, D. C. Wilson, E. A. Wilson, Isabel G. H. Wilson, H. Zaifol.

* With distinction.

UNIVERSITY OF ST. ANDREWS.

THE following candidates have been approved at the examinations indicated:

THIRD M.B., CH.B.—*Medical Jurisprudence and Public Health:* F. E. Anderson, C. R. Baxter, A. J. Campbell, Cora C. Campbell, G. Chawla, D. C. Clark, J. Craigie, W. M. Cumming, Jean M. Davidson, Violet C. Dobbie, Ruby N. Foggie, D. S. Greig, C. R. Henderson, Norah M. Lindberg, N. McLeod, Jean H. Morton, Janet Muirhead, R. Norrie, S. S. Ogilvie, A. Pride, A. B. Richardson, Agnes H. T. Shepherd, Lucy C. Simpson, B. Singh, Edith M. D. Smith, Blanche D. S. Spence, Janet O. Stephen, A. Tateson, W. Thomson, Frances H. Watson, T. Wilson. *Materia Medica and Therapeutics:* M. K. Afridi, G. F. G. Batchelor, C. R. Baxter, N. T. Brown, D. R. Cameron, J. Dallas, Ellen Douglas, H. H. A. Elder, A. A. Finnigan, Jessie H. Fitchet, J. R. Graham, D. S. Greig, G. S. Halley, L. H. Henderson, R. A. Henry, J. A. G. Keddie, Lena E. Low, J. R. Miller, J. R. Murray, J. W. Napier, Margaret C. K. Patterson, J. A. Robb, P. C. Robertson, D. Rushton, Blanche D. S. Spence, Jessie R. Watson, J. M. Webster, Margaret P. M. Wilkie. *Pathology:* M. Khan Afridi, D. S. Anderson, G. F. G. Batchelor, C. R. Baxter, T. F. Black, N. T. Brown, D. R. Cameron, G. S. Chawla, J. Dallas, W. F. Dorward, Ellen Douglas, H. S. Edwards, H. H. A. Elder, A. A. Finnigan, Jessie H. Fitchet, J. R. Graham, D. S. Greig, G. S. Halley, Jean T. Harris, A. Henderson, L. H. Henderson, R. A. Henry, Lilian A. M. Johnston, J. A. G. Keddie, G. D. Laing, Jeannie P. Laird, Lena E. Low, F. McLagan, R. S. Melville, J. R. Miller, Hermina M. Morrison, J. W. Napier, J. E. Overstead, Margaret C. K. Patterson, P. C. Robertson, D. Rushton, Isabella Sim, D. B. Soutar, Gertrude J. Sturrock, I. C. Thomson, Jessie R. Watson, J. M. Webster, Margaret P. M. Wilkie.

FOURTH M.B., CH.B.—*Medicine:* G. G. Buchanan, Katharine M. Campbell, Georgina S. Craig, D. W. Dawson, V. S. Ewing, Phyllis Fleming, Annie A. Fulton, A. H. Harkens, L. Jacobs, Isabella D. Kilgour, Nona S. Lesslie, Elizabeth W. MacVicar, Isobel M. Mansie, R. S. Paton, J. D. Stewart, Christina J. Thomson, Margaret L. Tod, Margaret H. R. Young. *Surgery:* Georgina S. Craig, D. W. Dawson, V. S. Ewing, Phyllis Fleming, Annie A. Fulton, A. H. Harkens, Isabella D. Kilgour, Katharine D. Macfarlane, Elizabeth W. MacVicar, G. J. Murray, R. S. Paton, J. D. Stewart, Christina J. Thomson, Margaret L. Tod. *Midwifery:* Georgina S. Craig, D. W. Dawson, V. S. Ewing, Annie A. Fulton, A. H. Harkens, L. Jacobs, Isabella D. Kilgour, Nona S. Lesslie, Katharine D. Macfarlane, Elizabeth W. MacVicar, Isobel M. Mansie, G. J. Murray, R. S. Paton, J. N. D. Smith, J. D. Stewart, Christina J. Thomson, Margaret L. Tod, Margaret H. R. Young.

FIRST D.P.H.—*Physics:* Florence B. Mason. *Bacteriology:* Sheila Bridgeford, Edith D. Dobbie.

SECOND D.P.H.—*Sanitation and Epidemiology, and Sanitary Law and Vital Statistics:* W. Alexander, Sheila Bridgeford, Caroline R. Crystal, J. Ferguson, W. S. King, Florence B. Mason, O. Johnston passed in Sanitation and Epidemiology only.

Medical News.

WE regret to announce the death, on July 5th, of Sir George Savage, consulting physician and former lecturer on mental diseases at Guy's Hospital, at the age of 78.

AT an honorary graduation ceremony held in the University of Glasgow on June 30th the degree of Doctor of Laws (LL.D.) was conferred on Dr. A. Freeland Fergus, President of the Royal Faculty of Physicians and Surgeons, Glasgow. At a meeting in the Faculty Hall, Glasgow, on June 29th, Dr. Freeland Fergus was presented with the gown and hood of his honorary doctorate by Fellows of Faculty.

AN International Congress on Military Medicine and Pharmacy, in which the British Army Medical Department is taking part, takes place in Brussels from July 15th to 20th. The subjects for discussion include the relations of the army medical service with the Red Cross; clinical and therapeutic studies of poison gases; the campaign against tuberculosis and venereal disease in the army; lessons of the war in the treatment of fractures; and the problem of water purification on campaign.

THE newly elected officers of the Röntgen Society are:—President: Professor J. W. Nicholson, F.R.S. Vice-Presidents: Dr. G. H. Rodman, Sir Ernest Rutherford, F.R.S., and Sir William Bragg, K.B.E., F.R.S. Honorary Treasurer: Mr. Geoffrey Pearce. Honorary Secretaries: Dr. E. A. Owen and Dr. J. Russell Reynolds. Honorary Editor: Major G. W. C. Kaye, O.B.E., M.A., D.Sc.

IN accordance with the regulations which the Ministry of Health have recently issued requiring all health visitors to undergo a special course of training recognized by the Board of Education, the National Health Society has rearranged its scheme of training for health visitors and infant welfare workers. For students who have no previous knowledge of the work a two years' course is now necessary, but for fully trained nurses, health visitors of three years' standing, and students who have obtained a university degree or its equivalent the period is reduced to one year. The next term will commence in September, and particulars can be obtained from the Secretary, National Health Society, 53, Berners Street, W.1.

THE National Housing and Town Planning Council states that the construction of 100,176 houses is in hand under the housing schemes of 1,208 local authorities in England and Wales.

AT a meeting of the Society for the Study of Inebriety, to be held at the rooms of the Medical Society of London on Tuesday next, July 12th, at 4 p.m., Dr. W. A. Potts, medical officer to the Birmingham Committee for the Care of the Mentally Defective, will open a discussion on alcohol and alcoholism in relation to mental deficiency.

THE Medical Supply Association, Ltd., recently advertised that it had acquired the whole of the surplus *x*-ray and electro-medical stores at the War Office. We are asked to state that the Supply Association has since learnt that the War Office had removed a portion of the apparatus before the sale, and that this portion is to be disposed of through the Joint Council of the Order of St. John and the British Red Cross Society.

DURING the annual meeting of the Ontario Medical Association it was stated that according to about 500 replies received to a questionnaire, the opinion obtains that approximately sixteen liquor prescriptions a month are needed in the practice of each physician.

THE *King's College Hospital Gazette* for June is the first number to be published since the war, and is another milestone in the renaissance of the activities of the hospital after the rather disturbed life it has had since the removal in 1913 to Denmark Hill. The editor must be congratulated on an excellent beginning and on the range of his contents—from an interesting article on epidemic encephalitis by Dr. Kinnier Wilson to an amusing skit, in the manner of certain organs of the daily press, entitled, "Aunt Dolly's Corner." Verse, prose—serious and gay—and black-and-white art are all well represented. It is published quarterly, price 1s.

THE Danish Government has allotted half a million kronen for the purchase of radium for use in the hospitals. It is hoped to raise another million by voluntary contributions.

A POST-GRADUATE course on orthopaedics will be held at the Orthopaedic Institute of Berck-sur-Mer (Pas de Calais) from August 1st to 8th. The fee will be 150 francs; particulars may be obtained from Dr. Foche, Institut Calot, Berck, or Clinique Calot, 69, Quai d'Orsay, Paris.

IN April 521 cases of plague are known to have occurred in Java; all were fatal.

DR. G. E. GILLETT, on his departure from Brooke, Norwich, for New Zealand, has been presented by his friends and patients with an illuminated address and a purse of Treasury notes, as a mark of their esteem.

MAJOR ANDREW ELLIOTT, R.A.M.C.(T.F.), has been appointed a Knight of Grace of the Order of St. John of Jerusalem.

THE style of the firm of Walton and Curtis, of Old Cavendish Street, W.1, makers of belts and other surgical appliances, has been changed to H. E. Curtis and Sons, Ltd.

THE late Dr. Henry Barnes of Carlisle left net personalty of £15,815. He bequeathed his medical books to the Royal Society of Medicine, and £50 each to the Royal Medical Benevolent Fund, the Medical Auxiliary of the Church Missionary Society, Epsom College, and the Border Counties Home for Incurables, Carlisle.

DR. GENGOU has been appointed Director-General of Hygiene and Medicine in Belgium.

THE French Academy of Medicine has received a donation from the widow of the Marquis Visconti to found a triennial prize of 3,000 francs in memory of Infroit, the radiologist.

DR. CHARLES E. DE M. SAJOUS has been appointed professor of applied endocrinology, and Dr. George B. Wood professor of laryngology in the Graduate School of Medicine of the University of Pennsylvania.

THE Central Midwives Board held a penal meeting on June 22nd, Sir Francis Champneys presiding, when six cases were considered and four of the midwives were removed from the roll. The monthly meeting was held on the same day. The Board expressed its hope that the Minister of Health would not limit his approval of the rules of the Board, as finally arranged, to one year, as such a limitation could not fail seriously to impair the authority of the rules, on which the safety of the mothers and infants of the nation largely depended. The Board believed that the ground of the proposed limitation was only that the register of nurses is in preparation by the General Nursing Council; it pointed out that the necessary alteration in the rules could be made at any time without delay, whereas the revision of the rules as a whole would take far longer. It was hoped, therefore, that the rules would be approved for the usual period of five years. The Lady Dufferin Hospital, Karachi, was approved as a training school.

THE Royal Earlswood Institution, the pioneer institution for mental defectives, is now entering upon what, we trust, may prove a period of less financial anxiety owing to the liquidation of its accumulated debt of £25,000, thanks to a munificent legacy from Mr. Ray. We learn from the 74th annual report (1921), which has recently been issued, that 431 patients were resident in the establishment (278 males and 153 females) on December 31st, 1920, and that the average number under care during the year was 442; 47 cases were admitted, and 51 were discharged or died. Dr. Charles Caldecott, the medical superintendent, states that of the 14 deaths recorded (furnishing an annual death rate of 3.16 per cent. on the average number resident), pulmonary tuberculosis was responsible for 4, and 1 was due to intestinal tuberculosis, whilst 3 patients who between them had had no fewer than 3,437 fits recorded during 1920, passed away in the status epilepticus. No serious epidemics occurred, and Dr. Caldecott cites, in proof of the generally satisfactory conditions of life at Earlswood, the longevity of many of the "life patients," some of whom are now attaining advanced ages, one having resided more than sixty-eight years in the institution. There is nevertheless a proportion of "hospital cases," amounting to about 25 per cent.; epileptics number about 15 per cent. of the population. Of last year's entrants, 29 (66 per cent.) were under 14 years of age, and it is stated "that a few of the new cases appear bright and of a grade sufficiently high to raise hopes of improvement from training in our schools and workshops, but the heavy proportion of epileptic, paralysed and mongolian patients maintains our percentage of hospital cases." Of the 37 cases discharged, 26 were reported "improved," amongst whom were some "who will be quite able to assist in their own maintenance whilst living amongst relations or friends." It may be interesting to note that Earlswood, though of charitable foundation and dependent to a considerable extent on benevolent contributions for the maintenance of its poorer patients, has also excellent accommodation at higher rates of payment for those of higher social class. Considerable improvements are in progress in the various educational departments, and the arrangements for industrial training advance with the times. Recreation, both musical and muscular, is also a conspicuous feature in the life of the institution.

Letters, Notes, and Answers.

As, owing to printing difficulties, the JOURNAL *must be sent to press earlier than hitherto, it is essential that communications intended for the current issue should be received by the first post on Tuesday, and lengthy documents on Monday.*

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London;* telephone, 2630, Gerrard.

2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London;* telephone, 2630, Gerrard.

3. MEDICAL SECRETARY, *Medisecra, Westrand, London;* telephone, 2630, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin (telegrams: *Bacillus, Dublin;* telephone, 4737, Dublin), and of the Scottish Office, 6, Rutland Square, Edinburgh (telegrams: *Associate, Edinburgh;* telephone, 4361, Central).

QUERIES AND ANSWERS.

INCOME TAX.

"M. H.", who has been abroad since October, 1920, and expects to remain abroad for a total period of thirteen months, asks whether he is liable to British income tax on (1) a Research Fellowship and (2) a pension from the India Office. During his absence abroad his flat is sublet.

*** The principle involved is that if the income is derived from the United Kingdom it is liable to tax, although the recipient may be resident abroad. "M. H." *might* be able to claim exemption on that ground from tax on the India Office pension, but we hesitate to express an opinion to that effect as the question turns largely on the precise nature of the pension and of the fund out of which it is paid.

"CHANTLER" bought a new Humber coupé for £687, selling his second hand two-seater Humber for £475. The inspector refuses to allow the whole expenditure, £687–£475=£212, claiming to restrict the allowance to £62, the cost of replacing the two-seater car with a similar one.

*** The inspector appears to be in the right, for expenditure on improvement is regarded as capital expenditure, and as such cannot be deducted for income tax purposes. The fact that the improvement is forced upon the taxpayer by personal or local conditions is immaterial. Our correspondent's argument would apply *mutatis mutandis* to a claim for the cost of the original car purchased, which clearly represents an outlay of capital.

MADEIRA AND THE FRENCH RIVIERA.

IN reply to several correspondents, we may say that of all accessible places, north of the equator, Madeira probably has the most equable winter climate, particularly appropriate for chronic bronchitis. It must be remembered, however, that the island is small, that the choice of places of residence is limited, and that there may be difficulty in getting away owing to the boats being full. The information we have received is to the effect that visitors to Madeira during last winter found living expensive; hotel charges for board and lodging might be ten guineas a week without extras, although we have heard of a small boarding-house where the charge was half this amount. On the French Riviera also charges were high, but there is an extensive choice among many places, and with care it might be possible to live on much the same expenditure as in this country. We have heard a good deal of irritation expressed about the number and amount of the extras (*suppléments*) charged at hotels and restaurants both on the Riviera and in Madeira.

ACHING KNEE.

DR. K. R. COLLIS HALLOWES (Peebles) writes in reply to "M." to suggest the application of local radiant heat by means of ordinary apparatus or leucodescent lamp for fifteen minutes, followed by ionization for thirty minutes, using the salicyl ion for about a fortnight, and the chlorine ion for a month. The radiant heat should be immediately followed by the ionization, and three or four treatments a week should be the maximum, using a current of 30 to 40 milliampères. If a current of 60 to 80 milliampères be used two treatments per week will probably be sufficient.

LETTERS, NOTES, ETC.

CONSULTING ROOMS AND SPECULATORS.

COMPLAINTS are reaching us to the effect that in the West End of London speculators are getting control of consulting rooms, and with the help of much outward show attracting unsuspecting tenants. The house may turn out to be no more than a lodging house with very expensive bed-sitting rooms and a rapid flow of lodgers arriving and departing. It is, we are told, not uncommon for a house of this description to be sold as a going concern without the knowledge of the professional tenants, who may one day notice the furniture, obtained on the hire system, gradually disappearing, and find installed a new landlord or landlady who may have no knowledge of the management or regard for the amenities of a professional house. It would seem wise for seekers after a West End address to make certain of the bona fides of their prospective landlords or landladies, and in no case to omit the safeguard of a rigid financial inquiry as to solvency and previous experience. The success of a West End consulting practice depends in part upon good house management, and happily one of the few advantages of the present fall in prices is that the number of consulting rooms to let is daily becoming greater and rents in consequence less exorbitant.

PERSISTENT HEART BEAT AFTER CESSATION OF RESPIRATION.

DR. H. WALLACE-JONES (Liverpool) writes to say that he recorded in the *Lancet* of September 4th, 1920, a case in which the heart continued to beat for fifteen hours after cessation of respiration.

CHILD WELFARE POSTERS.

THE National League for Health, Maternity, and Child Welfare (4 and 5, Tavistock Square, W.C.1) has published a series of coloured posters on which are printed in bold lettering rhymes on such subjects as baby's food, clothes, exercise, and sleep. One of the rhymes run:

> Sleep, Baby, sleep!
> Baby, learn to sleep.
> Sleep is better worth than gold,
> Learn it young, you'll use it old,
> Sleep, Baby, sleep!

—but the others are really not so bad as that, and we imagine that the series will be useful in child welfare centres.

NORTHUMBRIAN HISTORY AND THE ASSOCIATION MEETING.

"R. T. W." (Manchester) writes: Many members of the British Medical Association who will visit Newcastle at the annual meeting will be well acquainted with the history of Northumbria, and of the Roman wall, and with the important part played by the Northumbrian Kings, by Lindisfarne, and by Bede's School at Jarrow, in the civilization of England. But the majority of members, even those who may have been lovers of English history in their early days, will probably know little of the old Northumbrian kingdom, since English university matriculation examinations in history are usually limited to the period after the Norman Conquest, and in schools little attention is usually paid to the very early periods of English history. I am sure, therefore, that many members would find their visit to Newcastle much more interesting if they read beforehand the section devoted to the Northumbrian kingdom in some standard English history. For those who have no time for more detailed accounts, I may mention the concise and interesting sketch of the old Northumbrian kingdom given in Green's *Short History of the English People* (London, 1919), and the short account given in Professor Tout's *Advanced History of Great Britain* (London, 1920). The district around Newcastle is one of the most interesting in the country historically.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 28, 29, 32, 33, 34, and 36 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 30 and 31.

THE appointment of certifying factory surgeon at Middleton in Teesdale (Durham) is vacant.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Six lines and under	0	9	0
Each additional line...	0	1	6
Whole single column (three columns to page)	7	10	0
Half single column	3	15	0
Half page	10	0	0
Whole page	20	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Tuesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.